

# Administrator Guide



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# 1

## Getting started

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# Administrator accounts

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Each newly installed DocuShare site contains a permanent site administrator account (**admin**) with a default password, and a permanent site administrator group account (**Group 1**). Whoever knows the admin account password can log into your site as the site administrator.



**CAUTION:** To help keep your site secure, change the default admin password immediately after you have installed DocuShare.

## Admin and administrator group accounts

As the DocuShare site administrator using the account **admin**, you have the authority to grant site administrator privileges to any registered user on the site simply by making the user a member of **Group 1**, the site administrator group account. When the user logs into the DocuShare site, using their own username and password, DocuShare prompts the user to either continue as a registered user or to continue as a site administrator.

Admin and all members of Group 1 have full access to the DocuShare site and can perform any operation on any object or parameter within the site. By default, Group 1 is a member of both Group 2 (content administrator) and Group 3 (account administrator).

As a logged in site administrator, you have the authority to:

- Edit the default properties and default property values of site object classes
- Create new site objects classes
- Create new user and group accounts
- Change site and server properties
- Generate and read log files
- Modify your site appearance and functionality
- Modify your site license
- Edit the properties of site objects, such as changing a user password or adding members to a group
- Relocate, delete, or edit the content of any object on the site

## **Content administrator (Group 2) account**

Adding a registered user to Group 2 gives that user content administrator privileges. When the user logs into the DocuShare site, using their own username and password, DocuShare gives them authority to:

- Relocate, delete, or edit the properties of all site objects.

## **Account administrator (Group 3) account**

Adding a registered user to Group 3 gives that user account administrator privileges. When the user logs into the DocuShare site, using their own username and password, DocuShare gives them authority to:

- Edit the properties of all user and group accounts.

# Administration UI

The tools available through the DocuShare Administration UI allow a logged in site administrator, or any user who is a member of Group 1, to manage a DocuShare site and all of the objects within that site.

The illustration below explains the purpose of various areas of the Administration UI.

Click to go to the site **Help Desk**

Click to **log out** as admin

Click to go to the **DocuShare home page**

Name	Value
Logging Level	INFO
System Mode	%r [%t] %-5p %c - %m%n

Reset

Apply

Select an item from the **Administration Menu**

The page associated with the selected Administration Menu item appears in the **main window**

## Administration menu

---

The Administration menu and the main window make up the Administrator UI. You may configure DocuShare so the Administration menu appears as either an expandable/collapsible tree structure or as a static menu.



**TECH NOTE:** Netscape users. To see the Administration menu, you must install the **Full version**, not the **Recommended version**, of **Netscape 7.0**.

To use the Administration menu, click on a menu item to display the page associated with that item. Item pages contain various properties and property value fields, in addition to menus and radio buttons to help you make property selections.

[Table 1–1](#) shows the available Administration menu items and their purpose.

Table 1–1: Administration menu items

Menu Item	Description
<b>Object Properties</b>	
Bulletin	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Bulletin Board	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Calendar	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Collection	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.

Table 1–1: Administration menu items

Menu Item	Description
Document	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Event	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Group	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Saved Query	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Subscription	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
URL	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
User	Make changes to the default properties and the default property values of this object class. Create custom properties for this object class.
Custom Object	Create, modify default properties, and delete a custom object class.
Update Properties	Review and save the changes that you made to the default properties and the default property values of all object classes.
<b>Account Management</b>	
Access Policies	Select who has permission to access this site and who has permission to create new user accounts on this site.

Table 1–1: Administration menu items

Menu Item	Description
<b>Users</b>	
List Users	List all of the registered user accounts on this site.
Find User	Locate a single registered user account on this site.
Add User	Create a new user account on this site.
Merge Accounts	Merge several user accounts into a single user account.
Account Activity	Generate a report showing when each registered user last logged into this site.
<b>Groups</b>	
List Groups	List all of the group accounts on this site.
Add Group	Create a new group account on this site, and add members to that group.
Domains	Create, edit, and delete internal and external domains.
<b>LDAP Accounts</b>	
Configuration	Set up and test a connection between your DocuShare site and an external LDAP server.
Add	Add to your local external domain pointer, all or some of the accounts that exist in the external domain on the LDAP server.
Convert	Convert an internal domain user account to an external domain user account, or convert an external domain user account to an internal domain user account.
Rename	Update local user account username and/or domain information so it corresponds to username and domain changes that were made to the account at the LDAP server.

Table 1–1: Administration menu items

Menu Item	Description
Synchronize	Synchronize local user and group account property information with account property changes that were made at the LDAP sever.
Bind User	Set LDAP attributes and DocuShare properties for the entire User object class.
Bind Groups	Set LDAP attributes and DocuShare properties for the entire Group object class.
<b>Providers</b>	
Security Services	Enable LDAP as your external authentication provider.
Directory Services	Enable LDAP as your external directory provider.
<b>Services</b>	
<b>Conversion</b>	
Conversion Server	Set the logging level for the DocuShare Conversion Service.
Image Conversion	Set the image properties for the DocuShare Conversion Service.
Notification	Set the properties for the Swift MQ Java Messaging Service and the DocuShare user subscription messaging function.
Monitor	Set the properties for the DocuShare Monitor Service. The Monitor Service maintains the operation of the Verity Service and Notification Service.
Search	Set the properties for the Verity search and filtering programs.
Subscription	Enable or disable the DocuShare subscription service and to enter the Site Administrator email address.



Table 1–1: Administration menu items

Menu Item	Description
<b>Content Management</b>	
List Orphans	Locate and repair or delete orphaned objects.
Repository Use	Generate a customized report listing each registered user on this site, the number of files they own, and the total disk space those files occupy.
Root Collections	Select which collections appear on the site home page.
Trashcan Contents	Enable or disable the DocuShare trashcan function and Restore or expunge deleted content.
<b>Site Management</b>	
Class Icons	Select a new icon graphic to represent a specific object class.
About DocuShare	Display general information about your site, such as software version level.
Site Configuration	Make minor changes to the appearance and functionality of this site.
Database Properties	Configure the database that this site uses for document storage.
License	Update or change your site license.
Repository Log Files	Enable or disable access and error logging for this site.
MIME Types	Select the MIME type assignment method, add new MIME types, edit existing MIME types, or delete a MIME type.
Site Operations	Toggle this site between Read Only and Read/Write, and enter and show an administrator message.

Table 1–1: Administration menu items

Menu Item	Description
Directory Paths	Enter the paths to the document repository and to the temporary directory for this site.
Admin UI Configuration	
	Select the Administration menu style, either collapsible tree or static HTML menu and select how many levels of information you want to log and in what message layout format.

## Help

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Click **Help** to display the DocuShare Help Desk page. The Help Desk contains the site collection of DocuShare user and administrator documentation, product tutorials, and software downloads.

Table 1–2: Help Desk contents

Help Tab	Contents
Documentation	<p>DocuShare Installation, User, and Administrator guides.</p> <p>Click the <b>PDF</b> version to view a guide in Adobe Acrobat.</p> <p>Click the <b>HTML</b> version to view a guide online.</p>
Training	<p>DocuShare User and Administrator tutorials.</p> <p>The product tutorials provide a brief introduction to using and administering a DocuShare site.</p>
Software downloads	<p>DocuShare software application downloads, complete with user guides and tutorials.</p>

## Logout

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Click **Logout** to log out of the current session as a site administrator and return to the DocuShare Login page. At this point you can choose to Login to the site using your user account or return to the Administration UI by logging in again as admin.

## Home

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Click **Home** to display the DocuShare home page. You are still logged in as admin and you still have site administrator privileges. You may navigate the entire site, view, edit, relocate, and delete all objects within the site.

To return to the Administration UI, click **Admin Home** in the navigation bar.

# Setting up your new DocuShare site

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After you have installed the DocuShare software onto your server, you are now ready to configure your new DocuShare site. Initial site configuration involves the following actions:

- License your DocuShare site
- Set site properties
- Enable the site trashcan
- Set site access permissions
- Assign administrator rights to select users

There are additional site parameters and properties that you may change at your discretion, but for now you should accept the defaults and concentrate on these few initial tasks.

## License your DocuShare site

When first installed, DocuShare runs as an unlicensed site. An unlicensed DocuShare site contains all of the functionality of a licensed site, but you are limited to a maximum of 50 objects within the site.

To license your DocuShare site, go to the Administration menu item **Site Management / License** and enter your unique license string in the **License** field.

## Set site parameters

There are a few basic site parameters that you must set for DocuShare to function correctly. The most important setting is enabling the subscription service and supplying an admin email address. Without this information, the DocuShare subscription service will not work.

To enable DocuShare subscription service go to the Administration menu item **Services / Subscription**.

## Enable site trashcan

When the site trashcan is enabled, all deleted objects go immediately into the trashcan. A site administrator can view the contents of the trashcan and choose to restore or expunge the deleted objects.

To enable the site trashcan, go to the Administration menu item **Content Management / Trashcan Contents**.

## Set site access permissions

You should configure your DocuShare site so specific areas can be accessed only by one or more of the three types of DocuShare users; guests, registered users, and administrators. You may limit who may enter your DocuShare site and who may create new user accounts. Setting site access policies is a simple way to control security on your DocuShare site.

To set site access permissions go to the Administration menu item **Account Management / Access Policies**.

## Assign Site Administrator rights to select users

As the DocuShare site administrator using the account **admin**, you have authority to give site administrator privileges to any registered user on the site simply by adding them to site administrator group, **Group 1**. It is a good idea to immediately add one or two trusted users to Group 1, as precautionary backup site administrators. It is important to remember that all members of Group 1 have the same site administrative privileges as the main admin account.

When a registered user logs into the DocuShare site, and if that user is a member of Group 1, DocuShare allows the user to access the Administration UI.

To assign a registered user to the site administrator group:

1. From the **Administration** menu, click **Account Management / Groups / List Groups**.

The List Groups page appears.

2. Click **Site Administrators Group 1**.

The Group Services page appears.

3. Select **Edit Properties** from the menu, and click **Go**.

The Group Services page displays the current properties for Group 1.

4. In the **Add Member** menu, select the user accounts that you want to add to Group 1.
5. Click **Apply**.

The user accounts selected are now members of Group 1, and they all now have site administrator privileges.

## Assign content administrator rights to select users

Later, to help maintain the content of you site, you may choose to add select users to Group 2, the content administrator group. Anyone who is a member of Group 2 may relocate, delete, or edit the content of any object on the site. You can make another group a member of Group 2. As the site default, Group 1 is automatically a member of Group 2.

To assign a registered user to the content administrator group:

1. From the **Administration** menu, click **Account Management / Groups / List Groups**.

The List Groups page appears.

2. Click **Content Administrators Group 2**.

The Group Services page appears.

3. Select **Edit Properties** from the menu, and click **Go**.

The Group Services page displays the current properties for Group 2.

4. In the **Add Member** menu, select the user accounts that you want to add to Group 2.
5. Click **Apply**.

The user accounts selected are now members of Group 2, and they all now have content administrator privileges.



## Assign account administrator rights to select users

Later, to help maintain the content of your site, you may choose to add select users to Group 3, the account administrator group. Anyone who is a member of Group 3 may edit the properties of site user and group accounts. You can make another group a member of Group 3. As the site default, Group 1 is automatically a member of Group 3.

To assign a registered user to the account administrator group:

1. From the **Administration** menu, click **Account Management / Groups / List Groups**.

The List Groups page appears.

2. Click **Account Administrators Group 3**.

The Group Services page appears.

3. Select **Edit Properties** from the menu, and click **Go**.

The Group Services page displays the current properties for Group 3.

4. In the **Add Member** menu, select the user accounts that you want to add to Group 3.

5. Click **Apply**.

The user accounts selected are now members of Group 3, and they all now have account administrator privileges.

## DocuShare scan to file

---

If your site users have access to a Xerox Document Centre that has the scan to file feature enabled, they can scan documents directly to the DocuShare site. The Document Centre converts the documents to TIFF format and stores them in a temporary collection on the site. The user then saves the scanned documents to any permanent collection. Refer to Chapter 12 of the *DocuShare User Guide* for more information on using scan to file.

It is the task of the Document Centre administrator to configure the Document Centre templates for use with DocuShare. For more information on template configuration, refer to the setup and operation guides of your specific Document Centre.

There are a number of Document Centre settings that may adversely affect the DocuShare scan to file function. One of the most common is when users scan multiple pages during a single scan job. If your Document Centre is set to convert scans to **TIFF**, then the Centre generates multiple scan jobs. If your Document Centre is set to convert scans to **TIFF (multi)**, then the Centre generates a single scan job that contains multiple pages. Inform the Document Centre administrator of your TIFF setting preference.

### To use scan to file

To use the DocuShare scan to file feature, you must stop the **Microsoft FTP publishing service**.

### Resolving port conflicts

If you are having a port conflict with another FTP service on the same server and if the Document Centre you are using supports a port other than the default port 21, you must modify the **FTPD.conf** file. Note that only a few Document Centre models support a default port other than port 21. If you change the default port of the FTP service, Document Centres that do not support a different default port will not be able to scan to DocuShare.

## Changing scanned documents time in the temporary collection

Modify the `$DOCUSHARE_HOME\config\scan.properties` file to change the duration that scanned documents remain in the temporary scan collection before the system deletes them. To change the 4 hour default, set the file line **scan.expirefile=4** to any numerical value you want. Setting the value to zero disables automatic file deletion, so you must manually delete the files from the collection.

## Changing access to the Temporary Scan Repository

The Temporary Scan Repository on the DocuShare home page appears to the site administrator and content administrators. As an administrator, you manage the collection's access permissions and location. Depending on your site's security requirements, you can change the collection's permissions to give all logged-in users access to the collection.

## Auto login

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The DocuShare auto login feature allows Windows domain authentication to handle DocuShare login authentication. By default, this feature is disabled. To use auto login, you must configure your Internet Information Server (IIS) and enable the DocuShare Auto Login feature.

### Configure to use auto login:



NOTE: Make sure the DocuShare server usernames are the same usernames that are authenticated by the web server.

1. In the Control Panel, open the **Services** application.
2. In the Services window, select **IIS Server**.
3. Click **Stop**.
4. From the **Start** menu, select **Internet Information Manager**.
5. In the Microsoft Management Console window, right-click the **DocuShare server host**.  
The host server Properties window appears.
6. Click **Edit** for **Master Properties**.  
The WWW Service Master Properties window appears.
7. Click the **Directory Security** tab.
8. Right-click **Edit** for **Anonymous Access and Authentication Control**.  
The Authentication Methods window appears.
9. In the Authentication Methods window, disable **Allow Anonymous Access** and enable **Windows NT Challenge/Response**.
10. Click **OK**.
11. Start your IIS web site.
12. Login to DocuShare as admin.
13. Go to the Administration UI.

14. From the **Administration** menu, click **Site Management / Site Configuration**.

The Site Configuration page appears.

15. At the Enable Auto Login field, click **Yes**.
16. Click **Apply**.

DocuShare enables auto login.



**TECH NOTE:** You may use auto login with a web server other than IIS. Set the REMOTE\_USER environment variable to the username of the user you want to authenticate, as follows:

**REMOTE\_USER=<domain>/<username>**

Make sure the Remote User <username> matches the DocuShare <username>.

## DocuShare domains

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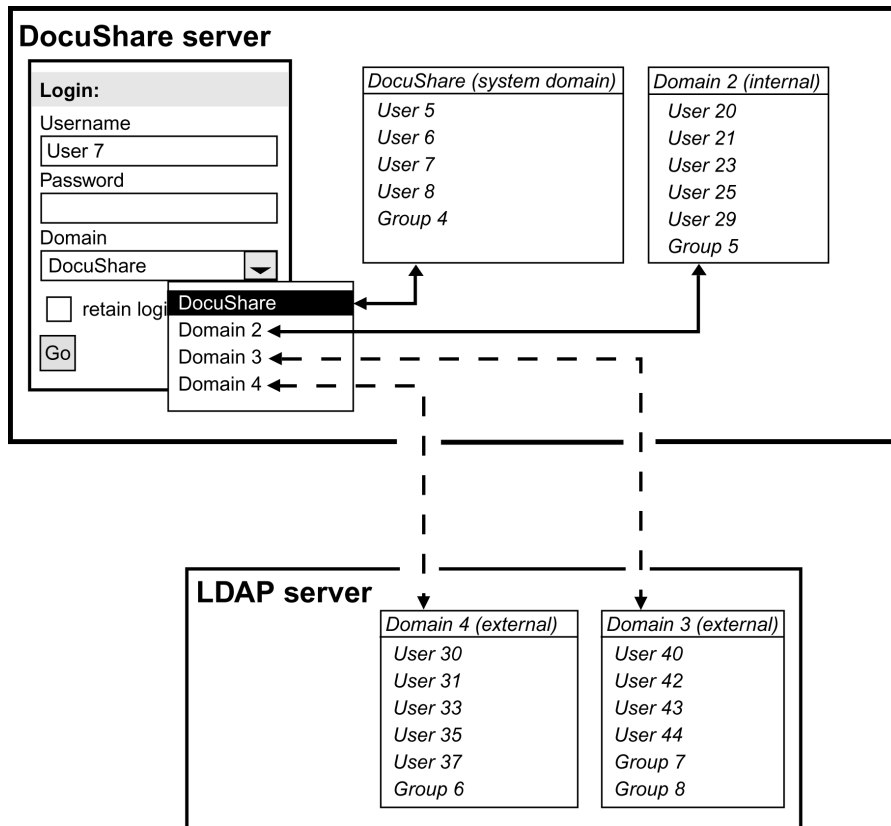
DocuShare domains are available as part of an optional add-on for your DocuShare site. Entering a special **LDAP add-on** license string in the **License** field on the Administration menu License page enables the use of internal and external domains. With LDAP enabled, domain fields and menus appear in various user and admin pages across your site, in addition to **Domain**, **LDAP Accounts**, and **Providers** items appearing in the Administration menu.



**TECH NOTE:** If for any reason your LDAP add-on license string is accidentally altered, all domains and domain administrator tools will disappear from the site. Re-entering the correct LDAP add-on license string will restore all domains and domain administrator tools. No domain data will be lost.

Currently, DocuShare supports only **LDAP** (Lightweight Directory Access Protocol) for creating and maintaining external domains. With LDAP/Domains enabled, the DocuShare administrator uses Administration menu tools to easily create internal domains. Creation and maintenance of external domains require LDAP server access and knowledge of the LDAP administration interface.

The illustration below shows a DocuShare site that uses both internal and external domains. During account creation, users and groups are assigned a specific domain as part of their distinguished name, such as **Username@xyzdomain**. At login, the user must select the appropriate domain from the **Domain** menu. Attempting to log into the wrong domain results in an error message and a prompt to retry the login.



## Internal domains

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An administrator may create any number of internal domains on a single DocuShare site. Internal domains are primarily useful for organization purposes. Currently, there are no access controls available for internal domains. Users may add themselves to any internal domain they choose. They may change their assigned internal domain, edit the properties of their account, and create accounts in other internal domains. Users may not create accounts in external domains. That is the task of the LDAP administrator.

When you enable the LDAP/Domains add-on, DocuShare displays a default internal domain named **DocuShare**. The DocuShare default domain is a system domain. You may change the name of the default domain to any unique name you choose, but you cannot delete it. Internal domains use DocuShare as both the authentication service and the directory service provider.

To create an internal domain:

1. From the **Administration** menu, select **Account Management / Domains**.

The Domains page appears. Domains appears on your Administration menu only if you have enabled LDAP.

2. Enter a unique name in the **Domain name** field.
3. Select **DocuShare/DocuShare** from the **Providers** menu.
4. Click **Add**.

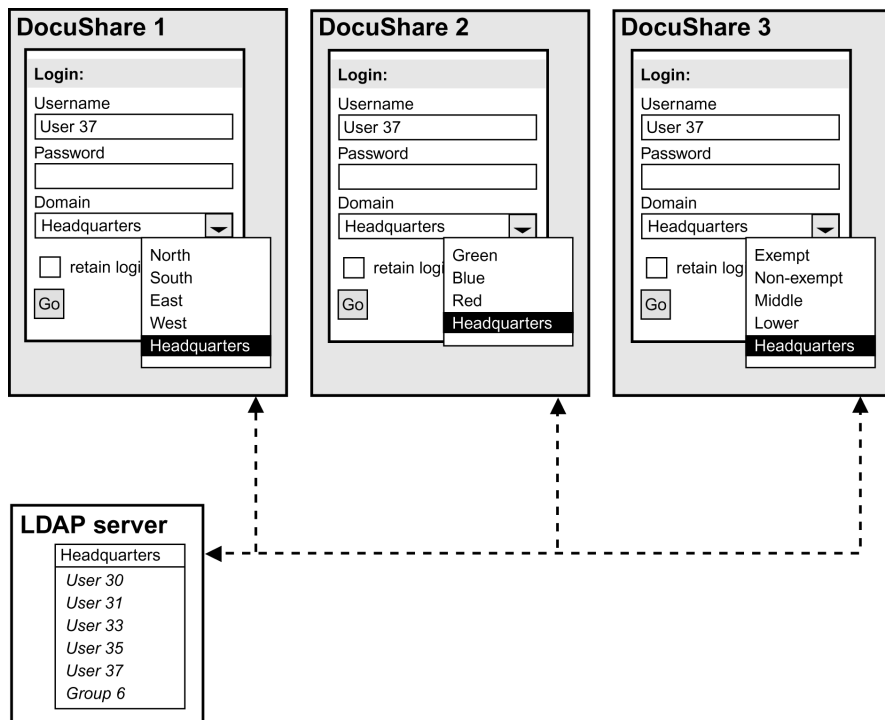
DocuShare creates a new internal domain. This domain now appears in all Domain menus on your site. Users may now create new accounts in the domain.



## LDAP and external domains

Currently, DocuShare supports only **LDAP** (Lightweight Directory Access Protocol) for creating and maintaining external domains. You may create any number of external domains on a single LDAP server. You may also direct your site to multiple LDAP servers (hosts); adding redundancy and thereby increasing the reliability and security of your site. The only limitation is that all LDAP servers must contain the same DIT (Directory Information Tree). If the main LDAP host is unavailable, DocuShare tries the alternates.

To avoid confusing users, you should give all domains unique names; ones that are not likely to be duplicated as either internal or external domain names on other DocuShare sites that you may use. A single LDAP external domain may be used by a number of DocuShare sites. This feature allows users in a single domain to log into any site that includes their domain listed in the Login window.



External domains are extremely useful for access control. External domains are administered directly at the LDAP server, using the LDAP administration UI. You cannot administer an external LDAP domain from the DocuShare administration UI. Currently, external domains use LDAP as both the authentication service and the directory service provider.

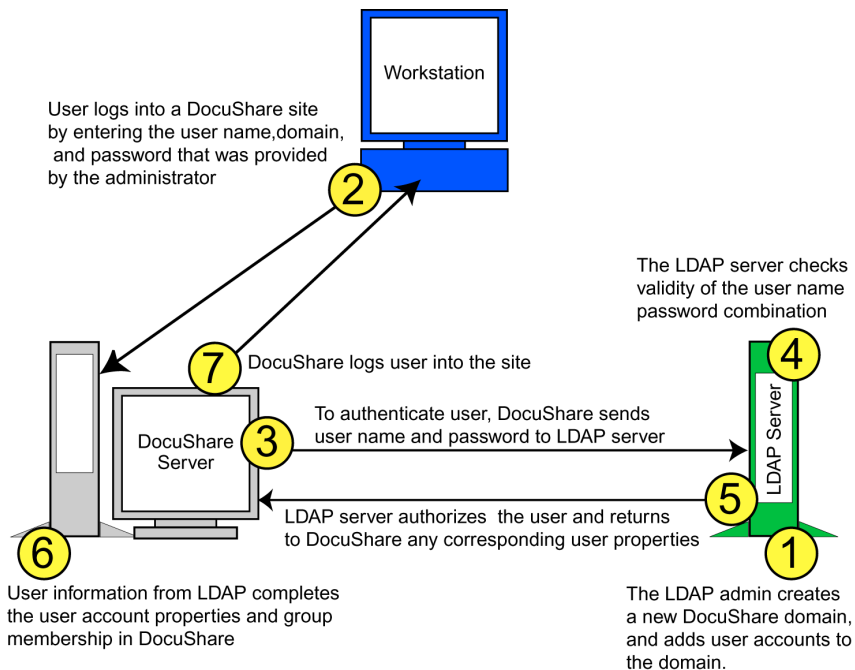
## User accounts on an external domain

The LDAP administrator creates accounts on the LDAP server, then gives the new user the username, domain, and password of the account. Users assigned to an external domain may view their account properties, change DocuShare related account information, change their password and username, and change their domain from external to internal.



**NOTE:** Users assigned to an external domain cannot change neither their password nor their username. The LDAP administrator must make those changes for them.

Unless the domain name specifically refers to it as "external", users have no way of knowing if their domain is internal or external. At login, a user merely selects their domain from a menu and DocuShare and LDAP perform all of the necessary authentication activities.



## Setting up the DocuShare and LDAP relationship

The working relationship between DocuShare and the LDAP server does not occur automatically. Simply identifying an LDAP server on your network does not create the relationship. To create the DocuShare/LDAP relationship you must:

1. Install an LDAP server, use your LDAP administrator UI to setup a domain (namespace) on the LDAP sever, and then create user and group accounts within that domain.
2. Use the DocuShare administrator menu tool **Account Management / LDAP Accounts /Configuration** to connect your DocuShare server to the LDAP server.
3. Use the DocuShare administration menu tool **Account Management / Providers / Security Services** to set the LDAP server as the account authentication source for your external domain.
4. Use the DocuShare administration menu tool **Account Management / Providers / Directory Services** to set the LDAP server as the account directory source for your external domain.
5. Use the DocuShare administration menu tool **Account Management / Domains** to add the external domain to your site registry. This only creates a local pointer to the existing external domain, it does not physically create a new domain on your site. The external domain now appears as a menu item on your site Login window.
6. Use the DocuShare administration menu tool **Account Management / Users / List Users** to list the users in your newly added external domain. At this point the domain appears empty. Now you must manually add user and group accounts from your external domain to the local domain pointer.
7. Use the DocuShare administration menu tool **Account Management / LDAP Accounts / Add** to select and add to your local list, all or some of the accounts that exist in the external domain. Not including an account in the **Add** operation, excludes that user from accessing your site.
8. Run **List Users** again and you will see your new domain populated with user and group accounts. It is important to remember that these accounts exist on the LDAP server and therefore must be maintained on the LDAP server. You cannot use DocuShare administration menu tools to administrator external domain accounts.

## DocuShare site maintenance

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As an administrator for your DocuShare site, you are responsible for a wide range of maintenance activities. Some maintenance activities are regular and ongoing, other activities may be infrequent.

Typical site maintenance activities include the following:

### Maintaining user and group accounts

- **Changing account properties.** If a user forgets their account password or needs help changing account information, you can easily access and change any account property.
- **Creating new user and group accounts.** In most cases users can create their own accounts, but there may be occasions when that task falls to the administrator. If your site uses external domains, creating and editing new user and group accounts on an external domain is the job of the LDAP administrator. Any changes made using the DocuShare UI must also be made at the LDAP server.
- **Merging multiple user accounts.** Sometimes a user may inadvertently create numerous user accounts on your site. To cleanup the site and organize the user's world, you can easily merge several accounts, and the objects associated with the accounts, into a single user account.
- **Deleting user and group accounts.** To cleanup and organize the site, you can delete obsolete user and group accounts.
- **Monitoring user activity and site usage.** To better understand site usage and population, you can view site repository use and user account activity reports.

### Maintaining the site

- **Backing up and restoring site data.** One of the most frequent and scheduled site maintenance activities should be backing up site data.
- **Checking for computer viruses.** We strongly advise that you install a robust virus checking application on your DocuShare server. Follow the application instructions for information on configuring, running, and updating your virus checking software.
- **Monitoring site errors.** To monitor the health of your site, you can view the site error logs.

- **Locating and fixing orphaned objects.** To cleanup and organize the site, you may need to locate, and delete or reassign unassigned objects.
- **Recovering objects from the trashcan.** Periodically you may be asked to restore a deleted object.
- **Updating the site license.** Occasionally you may have to update the site license to increase the site user capacity or enable a newly added DocuShare feature or foreign language add-on.

## Backup and restore

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To ensure data security, you should frequently and regularly backup your DocuShare site data.

### Backup data

1. Stop your DocuShare service by using either the **dsservice kill** or the **dsservice shutdown** command line utility.
2. From the MSDE Service Manager, stop the MSDE service.
3. Use your standard backup procedure to backup your entire **DocuShare directory** and all **documents directories** if they are stored outside of your DocuShare directory.
4. From the MSDE Service Manager, start the MSDE service.
5. Start your DocuShare service by using either the **start\_docushare** command line utility or restart DocuShare if it is running as a service.

### Restore data

1. Stop your DocuShare service by using either the **dsservice kill** or the **dsservice shutdown** command line utility.
2. From the MSDE Service Manager, stop the MSDE service.
3. Use your standard restore procedure to restore the required files.
  - For a **complete restore**, restore the entire DocuShare directory and all documents directories.
  - For a **selective restore**, restore the desired files:
    - %dshome%/documents = content (files, documents, etc.)
    - %dshome%/msde/data = internal database files (Metadata) if not using an external database
    - %dshome%/alliance/workbooks = document routing slips
    - %dshome%/amber/templates = web UI VDF files, css files
    - %dshome%/amber/web = web UI images, messages
4. From the MSDE Service Manager, start the MSDE service.

5. Start your DocuShare service by using either the **start\_docushare** command line utility or restart DocuShare if it is running as a service.
6. If you have performed a complete restore, you must now use the Administration UI/Administration menu to reconfigure your site. This includes re-entering your site license string.



TECH NOTE: If you are restoring your files to a new drive, you must get a new license string. Your old string will not work.



## DocuShare client applications

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DocuShare provides users with two client-side applications that can help them navigate their DocuShare site. Both applications are designed to be installed and run on Windows based PCs. DocuShare Windows Client software is included with your DocuShare software. DocuShare Outlook Client software must be purchased separately.

### Using WebDAV folders

DocuShare supports the WebDAV (Web Distributed Authoring and Versioning) protocol, which enables you to access DocuShare content through a WebDAV-compliant folder. Users do not need DocuShare client software installed on their computer. If a user is running Windows 2000 or XP, they simply go to **My Network Places** to add a DocuShare server as a network place. If a user has a Macintosh running OS X, they simply select **Connect to Server** to add the URL to a DocuShare server.



**TECH NOTE:** In both Windows and OS X, the user must append the DocuShare server's URL with /webdav. When a user is prompted to log in, they should use their DocuShare username and password.

### DocuShare Windows Client

DocuShare Windows Client seamlessly integrates DocuShare's document management features within your Windows desktop environment. Mapped DocuShare servers and collections appear as folders in Windows Explorer, enabling you to easily browse and search for stored files from a single location.

Using drag and drop, you can copy and move files between DocuShare collections and your local and network drives. You can also open, edit, and save DocuShare files from a variety of editor applications, such as Microsoft Word, Corel WordPerfect, and Windows accessories.

Refer to the DocuShare Windows Client Help for more information on using this application.

## DocuShare Outlook Client

DocuShare Outlook Client, purchased separately, enables you to conveniently manage and share information within Microsoft Outlook. Mapped DocuShare servers and collections appear as mail folders in your Inbox. Simply open a folder to browse the contents of a collection, open files for editing, and save new versions of files. You can easily archive and share mail messages and attachments by dragging and dropping them to a collection. When you need to find information quickly, you can perform keyword searches.

From a single desktop location, you can:

- Archive mail messages and attachments to DocuShare
- Open, edit, and save mail messages and files stored in DocuShare collections
- Copy and move objects between Outlook and DocuShare
- Change an object's properties and control access to objects
- Search for content in DocuShare

# DocuShare site customization

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There are a number of ways you can customize your DocuShare site to give it a unique look and feel. Some customization requires only site administrator privileges, while other customization requires programming experience and additional tools.

## Site styles customization

You can use the tools available through the Administration menu to make minor changes to your DocuShare site.

- **Create custom properties**

You can use the Administration menu / Object Properties tools to create custom object properties such as new input fields and new menus. You can also use the Custom Objects tool to create new object classes for your site. Refer to [Chapter 2, Object properties](#) for details on creating custom properties and custom objects.

- **Change site configuration**

You can use the Administration menu / Site Management / Site Configuration tool to customize a number of site attributes, such as the page background color. Refer to [Chapter 6, Site management](#) for details on changing your site configuration.

## DocuShare interface customization (XML)

If you are experienced in programming in XML, you can customize the DocuShare VDF interface pages to include unique art, fonts, colors, and fields. Refer to the optional *VDF Reference Guide* for details on interface customization.

## Custom scripts and client applications

If you are experienced in Microsoft Visual Basic, Visual Basic for Applications, Visual Basic Script, or C++, you can use the optional DocuShare Software Developers Kit (SDK) to program custom scripts and client applications for use with your DocuShare site. Refer to the *DocuShare Software Developers Kit* for online help and instructions.

## Command line utilities

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There are times while administering DocuShare, when you will need to enter command lines at the command prompt. Some commands lines are used frequently, such as when using command line utilities to backup or restore site data. Some command line utilities are used less frequently, such as batch commands to relocate a large number of files or command lines used in a script to perform automated functions. Refer to [Appendix B, Command lines and scripts](#) for a list of useful command line utilities.

# 2

## Object properties

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# Object properties overview

## Objects

Objects are the most common element populating a DocuShare site. There are currently eleven default object classes available. DocuShare also provides tools that allow you to create your own custom object classes.

Table 2–1: Default object classes

Object Class	Description
Bulletin	A message created by a user for posting on a site bulletin board.
Bulletin Board	A site message board. Users post bulletins on the site bulletin board.
Calendar	A site calendar. Users enter reminders, or events, on specific calendar days.
Collection	A DocuShare equivalent of a folder. Anyone can create a new collection. Users place other objects, such as documents or calendars, inside collections. Collections may also contain other collections.
Document	A file stored on a DocuShare site, such as a .doc file.
Event	A calendar entry, such as a meeting day and time.
Group	An assemblage of users, groups, or both.
Saved Query	Saved DocuShare search terms.
Subscription	When applied to an object, subscription emails data changes to all subscribed users.
URL	A standard WWW address.
User	A registered user account.

## Object class default properties and property values

As a site administrator you have the authority to change the default property and property values of all object classes on your site. Each object class has an associated set of default properties and assigned default property values that help to define the character and function of that object class.

As an example, the DocuShare object class **User** has **Email Format** as a default property and either **Plain Text** or **HTML** as the default property value. As a site administrator, you can use tools in the Administration menu to both modify the Email Format properties and to select either Plain Text or HTML as the default property value. With some object properties you select default values either from a menu or from radio buttons. Other object properties provide a field where you may enter text.

On the object class property pages, each property field displays associated information about the property and the current value of the property. [Table 2–2](#) explains the meaning of that information.

Table 2–2: Property information

Property Information	Description
Label	The current name of the property.
Type	The current data type of the property value, such as a string or a menu.
Default	The current default value, if any, of the property.
Required	If checked, it means a default value is necessary to create this object.
System	If checked, it means the property is used by the DocuShare system.
Read Only	If checked, it means the property is generated by the DocuShare system.
Search	If checked, it means the property can be included in a search.

Table 2–2: Property information

Property Information	Description
External	If checked, it means the property is an managed outside of the local DocuShare system.

Default properties and default property values are global and appear throughout your site as properties for both newly created and existing objects. Owners of individual objects may choose to change a default property value, but they may not edit nor delete an object class property. The site administrator may configure some properties so that a property value is required. DocuShare displays an error message if the creator of an object fails to enter data into a required field on an object properties page.

DocuShare holds all object property changes in session. When you have completed your changes to default property values, you then navigate to **Update Properties**, where you can review, change, delete, or save all of your changes.

## Changing the property values of individual objects

Owners of site objects can change the property values of their own objects, but as a logged in site administrator you have the authority to change the property values of all individual objects on your site. If you have site administrator privileges and you are on the user side of your DocuShare site, clicking the properties icon that appears next to an object displays a properties page for that object. By editing the properties page, you can change specific property values, such as a user password or members of a group. You can also delete the object.

If you are working on the administration side of your DocuShare site, you can **List Users** or **List Groups**, then click on any account in the list to display the properties page for that account. By editing the properties page, you can change the property values of the account or you can delete the account.



## Creating custom properties

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Using the Add Custom Property menu, you can add, edit, or delete custom properties for any DocuShare object class. For example, you could use the Add Custom Property menu to create a Budget Center fill-in field for each user on your site, or you could create a list of meeting rooms that are available for calendar event objects. Each object properties page contains an Add Custom Property menu that lists the available types of custom properties.

### Types of custom properties available

- **Boolean**—Create a property field that accepts either a Yes or a No value. You must specify displayed labels for the Yes and No choices.
- **Date**—Create a property field that accepts numeric values in date format, with each value separated by either a forward slash (/), dash (-), or a comma (.). The DocuShare system converts the date into the correct internal format.
- **Email**—Create a property field that accepts an email address.
- **Float**—Create a property field that accepts a floating point value. You can specify a minimum and maximum integer value. DocuShare generates and displays an error message if the user enters a value that is out of range.
- **Integer**—Create a property field that accepts integer values. You can specify a minimum and a maximum integer value. DocuShare generates and displays an error message if the user enters a value that is out of range.
- **Menu**—Create a menu that displays entered values. Use a comma to separate each item you want listed in the menu.
- **String**—Create a property field that accepts a string value. The standard properties summary is an example of a string property.
- **Text**—Create a property field that accepts an arbitrary length text value. The standard properties description is an example of a text property. Text properties are indexed as stream data. DocuShare applies all advanced word searches, such as word stemming, to stream data.
- **Title**—Create a property field that accepts an object title.
- **URL**—Create a property field that accepts a URL as a string value.

## To create a custom property

To create a custom property for an object class:

1. In the Object Properties category of the **Administration** menu, click the **object class**, such as Bulletin, that you want to edit.

The property page for that object class appears.

2. From the **Add Custom Property** menu located near the top of the page, select the type of property you want to add to the object.

3. Click **Go**.

The Add Object Class property page appears.

4. Enter information into the fields presented for your specific object property page.

You must enter data into all fields that are labeled required.

For Help on a specific field, click the field label.

5. Click **Add**.

DocuShare adds the custom property to the object class.

6. Click **Object Properties / Update Properties**.

The Update Properties page appears.

7. Review your changes and, if necessary, return to the object property page to modify your custom property.

8. When you are satisfied with your changes, click **Submit**.

DocuShare saves your custom property.

## To edit a custom property

To edit a custom object class property:

1. In the Object Properties category of the **Administration** menu, click the **object class**, such as **Bulletin**, that you want to edit.  
The object property page appears.
2. To change a custom property, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate property on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and, if necessary, return to the object property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all object property pages.

## To delete a custom property

You may delete only custom properties. A delete button does not appear for system properties.

To delete a custom object class property:

1. In the Object Properties category of the **Administration** menu, click the **object class**, such as Bulletin, that you want to edit.

The object property page appears.

2. To delete a custom property, locate the appropriate property and click **Edit** next to that property.

An Edit Property page appears.

3. Click **Delete**.

DocuShare saves the changes.

4. Click **Object Properties / Update Properties**.

The Updated Properties page appears.

5. Review your changes and, if necessary, return to the object property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare deletes the property from all of the object property pages.

## Bulletin properties

---

Use **Object Properties / Bulletin** to make changes to the default properties and default property values for the object class **bulletin**. Changes you make to the bulletin property values are global and apply to both new and existing bulletin objects.

To change bulletin object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Bulletin**.  
The bulletin property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the bulletin object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the bulletin property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all bulletin property pages.

To create a custom default property for the bulletin object class:

1. From the **Administration** menu, click **Object Properties / Bulletin**.  
The bulletin property page appears.
2. Select a custom property from the **Add Custom Property** menu and click **Go**.  
The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.  
DocuShare adds the new property to the bulletin property page.
4. When you have finished making changes to the bulletin object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
5. Review your changes and if necessary, return to the bulletin property page to modify the changes.
6. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all bulletin property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–3: Bulletin properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.
Modified Date	The date and time when the object was last changed.
Create Date	The date and time when the object was added to DocuShare.

## Bulletin board properties

---

Use **Object Properties / Bulletin Board** to make changes to the default properties and default property values for the object class **bulletin board**. Changes you make to the bulletin board property values are global and apply to both new and existing bulletin board objects.

To change bulletin board object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Bulletin Board**.  
The bulletin board property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the bulletin board object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the bulletin board property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all bulletin board property pages.

To create a custom default property for the bulletin board object class:

1. From the **Administration** menu, click **Object Properties / Bulletin Board**.  
The bulletin board property page appears.

- 2. Select a custom property from the **Add Custom Property** menu and click **Go**.  
The Add Property page appears.
- 3. Change the appropriate properties on the Add Property page and click **Add**.  
DocuShare adds the new property to the bulletin board property page.
- 4. When you have finished making changes to the bulletin board object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
- 5. Review your changes and if necessary, return to the bulletin board property page to modify the changes.
- 6. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all bulletin board property pages.



NOTE: If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–4: Bulletin board properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.



Table 2–4: Bulletin board properties

Property	Description
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Background Image	The URL or handle of a GIF or JPEG image. The URL is any valid Internet address for an image file (for example, <a href="http://www.mycompany.com/images/image.gif">http://www.mycompany.com/images/image.gif</a> ) and the handle is the handle number of an image in a DocuShare repository (for example, Document -12). The image displays in the background of the bulletin board's page.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.
Bulletins Expire In	The length of time to retain bulletins in the bulletin board after they are added. When a bulletin becomes older than the selected duration, it no longer appears in the bulletin board. Expired bulletins can be viewed and deleted on the bulletin board's View Expired page.
Logo	The URL or handle of a GIF or JPEG image. The URL is any valid Internet address for an image file (for example, <a href="http://www.mycompany.com/images/image.gif">http://www.mycompany.com/images/image.gif</a> ) and the handle is the handle number of an image in a DocuShare repository (for example, Document -12). The image displays at the top of the bulletin board's page.

## Calendar properties

---

Use **Object Properties / Calendar** to make changes to the default properties and default property values for the object class **calendar**. Changes you make to the calendar property values are global and apply to both new and existing calendar objects.

To change calendar object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Calendar**.  
The calendar property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the calendar object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the calendar property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all calendar property pages.

To create a custom default property for the calendar object class:

1. From the **Administration** menu, click **Object Properties / Calendar**.  
The calendar property page appears.

2. Select a custom property from the **Add Custom Property** menu and click **Go**.

The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the calendar property page.

4. When you have finished making changes to the calendar object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the calendar property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all calendar property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–5: Calendar properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.

Table 2–5: Calendar properties

Property	Description
Default View	Displays the calendar as a series of individual months or individual weeks each time the calendar is opened. Once open, the calendar view can be changed.
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.

## Collection properties

---

Use **Object Properties / Collection** to make changes to the default properties and default property values for the object class **collection**. Changes you make to the collection property values are global and apply to both new and existing collection objects.

To change collection object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Collection**.

The collection property page appears.

2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.

An Edit Property page appears.

3. Change the appropriate properties and values on the Edit Property page.

Click on a property name for information about that property.

4. When you have finished, click **Update**.

DocuShare saves the changes.

5. When you have finished making changes to the collection object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

6. Review your changes and if necessary, return to the collection property page to modify the changes.

7. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all collection property pages.

To create a custom default property for the collection object class:

1. From the **Administration** menu, click **Object Properties / Collection**.

The collection property page appears.

2. Select a custom property from the **Add Custom Property** menu and click **Go**.

The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the collection property page.

4. When you have finished making changes to the collection object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the collection property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all collection property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–6: Collection properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.

Table 2–6: Collection properties

Property	Description
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Logo	The URL or handle of a GIF or JPEG image. The URL is any valid Internet address for an image file (for example, <a href="http://www.mycompany.com/images/image.gif">http://www.mycompany.com/images/image.gif</a> ) and the handle is the handle number of an image in a DocuShare repository (for example, Document -12). The image displays at the top of the collection's page.
Background Image	The URL or handle of a GIF or JPEG image. The URL is any valid Internet address for an image file (for example, <a href="http://www.mycompany.com/images/image.gif">http://www.mycompany.com/images/image.gif</a> ) and the handle is the handle number of an image in a DocuShare repository (for example, Document -12). The image displays in the background of the collection's page.
Sort Order	<p>The order in which objects are displayed in the collection:</p> <p><b>Type and Title</b> groups objects by type and orders objects alphabetically by title.</p> <p><b>Type and Date</b> groups objects by type and orders objects chronologically, with most recently modified objects displayed first.</p> <p><b>Date</b> displays objects chronologically, with most recently modified objects displayed first.</p> <p><b>Title</b> displays objects alphabetically by title.</p> <p><b>Title Reversed</b> displays objects in reverse alphabetical order by title.</p>
View Format	<p>The format in which objects are displayed in the collection:</p> <p><b>Detailed Listing</b> displays objects in a list.</p> <p><b>Images</b> displays image files as thumbnails and all other object types as large icons.</p>

Table 2–6: Collection properties

Property	Description
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.
Route Before Publishing	Requires each document to be routed before it is added to the collection.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.



## Document properties

---

Use **Object Properties / Document** to make changes to the default properties and default property values for the object class **document**. Changes you make to the document property values are global and apply to both new and existing document objects.

To change document object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Document**.  
The document property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the document object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the document property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all document property pages.

To create a custom default property for the document object class:

1. From the **Administration** menu, click **Object Properties / Document**.  
The document property page appears.
2. Select a custom property from the **Add Custom Property** menu and click **Go**.  
The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the document property page.

4. When you have finished making changes to the document object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the document property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all document property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–7: Document properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Author	The document's author or authors. An author can be someone other than the document's owner.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.

Table 2–7: Document properties

Property	Description
Abstract	For non-image documents, a summary of the document's contents. The abstract appears immediately after the document is indexed.
Content Type	<p>The format of the document, as defined by its MIME Type. For example, a Microsoft Word document would map to the MIME Type application/msword. DocuShare uses the MIME Type to open a document in the appropriate editor.</p> <p>When a document is uploaded to the server, DocuShare tries to determine the content type. If the type cannot be determined, you can enter the appropriate MIME Type for the document.</p>
Max Versions	The maximum number of versions DocuShare saves. When a new version of a document is saved, the oldest version is deleted.
Size	The size of the document in bytes.
File name	The original filename.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.
Create Date	The date and time when the object was added to DocuShare.
Highest Version	The highest version number currently assigned for the document.
Routing Required	Requires the document to be routed.
Modified Date	The date and time when the object was last changed.

## Event properties

---

Use **Object Properties / Event** to make changes to the default properties and default property values for the object class **event**. Changes you make to the event property values are global and apply to both new and existing event objects.

To change event object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Event**.  
The event property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the event object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the event property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all event property pages.

To create a custom default property for the event object class:

1. From the **Administration** menu, click **Object Properties / Event**.  
The event property page appears.
2. Select a custom property from the **Add Custom Property** menu and click **Go**.  
The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the event property page.

4. When you have finished making changes to the event object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the event property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all event property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–8: Event properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.

Table 2–8: Event properties

Property	Description
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.

## Group properties

---

Use **Object Properties / Group** to make changes to the default properties and default property values for the object class **group**. Changes you make to the group property values are global and apply to both new and existing group objects.

To change group object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Group**.  
The group property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the group object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the group property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all group property pages.

To create a custom default property for the group object class:

1. From the **Administration** menu, click **Object Properties / Group**.  
The group property page appears.

2. Select a custom property from the **Add Custom Property** menu and click **Go**.

The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the group property page.

4. When you have finished making changes to the group object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the group property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all group property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–9: Group properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.



Table 2–9: Group properties

Property	Description
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Domain	The organization or entity to which the group belongs. This field appears if your site uses the LDAP add-on.
Remote Distinguished Name	Define the name by which external group information is retrieved.

## Saved query properties

---

Use **Object Properties / Saved Query** to make changes to the default properties and default property values for the object class **saved query**. Changes you make to the saved query property values are global and apply to both new and existing saved query objects.

To change saved query object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Saved Query**.  
The saved query property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the saved query object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the saved query property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all saved query property pages.

To create a custom default property for the saved query object class:

1. From the **Administration** menu, click **Object Properties / Saved Query**.  
The saved query property page appears.

2. Select a custom property from the **Add Custom Property** menu and click **Go**.

The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the saved query property page.

4. When you have finished making changes to the saved query object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the saved query property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all saved query property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–10: Saved Query properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.

Table 2–10: Saved Query properties

Property	Description
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.

## Subscription properties

---

Use **Object Properties / Subscription** to make changes to the default properties and default property values for the object class **subscription**. Changes you make to the subscription property values are global and apply to both new and existing subscription objects.

To change subscription object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / Subscription**.  
The subscription property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the subscription object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the subscription property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all subscription property pages.

To create a custom default property for the subscription object class:

1. From the **Administration** menu, click **Object Properties / Subscription**.  
The subscription property page appears.

2. Select a custom property from the **Add Custom Property** menu and click **Go**.

The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the subscription property page.

4. When you have finished making changes to the subscription object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the subscription property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all subscription property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–11: Subscription properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.

Table 2–11: Subscription properties

Property	Description
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.
Events of Interest	The DocuShare events to which to subscribe. When one of these events occurs, DocuShare sends an email message.
Period	The time period at which to notify the user when an event of interest occurs: <b>Immediate</b> provides notification immediately after the event occurs. <b>Daily</b> provides notification in a daily summary report. <b>Weekly</b> provides notification in a weekly summary report.
Include Recipient Activity	Notifies the user whose action caused the subscription notification. Setting this property to No prevents the user from receiving notification about an action he or she made.
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.

## URL properties

---

Use **Object Properties / URL** to make changes to the default properties and default property values for the object class **URL**. Changes you make to the URL property values are global and apply to both new and existing URL objects.

To change URL object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / URL**.  
The URL property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the URL object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the URL property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all URL property pages.

To create a custom default property for the URL object class:

1. From the **Administration** menu, click **Object Properties / URL**.  
The URL property page appears.
2. Select a custom property from the **Add Custom Property** menu and click **Go**.  
The Add Property page appears.



3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the URL property page.

4. When you have finished making changes to the URL object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the URL property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all URL property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–12: URL properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the object. The summary appears below the object's title.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.

Table 2–12: URL properties

Property	Description
URL	<p>The complete Internet address of a Web page. For example: <code>http://www.website.com</code>.</p> <p>While viewing the Web page in a browser, you can copy the URL from the Address or Location field and paste it into the URL field.</p>
Create Date	The date and time when the object was added to DocuShare.
Modified Date	The date and time when the object was last changed.
Expiration Date	The date on which the object is no longer needed. Users can search for expired objects and delete or archive them.

## User properties

---

Use **Object Properties / User** to make changes to the default properties and default property values for the object class **user**. Changes you make to the user property values are global and apply to both new and existing user objects.

To change user object class default properties and default property values:

1. From the **Administration** menu, click **Object Properties / User**.  
The user property page appears.
2. To change a property or a default property value, locate the appropriate property and click **Edit** next to that property.  
An Edit Property page appears.
3. Change the appropriate properties and values on the Edit Property page.  
Click on a property name for information about that property.
4. When you have finished, click **Update**.  
DocuShare saves the changes.
5. When you have finished making changes to the user object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
6. Review your changes and if necessary, return to the user property page to modify the changes.
7. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all user property pages.

To create a custom default property for the user object class:

1. From the **Administration** menu, click **Object Properties / User**.  
The user property page appears.
2. Select a custom property from the **Add Custom Property** menu and click **Go**.  
The Add Property page appears.

3. Change the appropriate properties on the Add Property page and click **Add**.

DocuShare adds the new property to the user property page.

4. When you have finished making changes to the user object class, click **Object Properties / Update Properties**.

The Update Properties page appears.

5. Review your changes and if necessary, return to the user property page to modify the changes.

6. When you are satisfied with your changes, click **Submit**.

DocuShare saves your changes and applies them to all user property pages.



**NOTE:** If a change contains any invalid property values, DocuShare displays a message describing the problem.

Table 2–13: User properties

Property	Description
Username	The name used to log in to DocuShare. When creating objects, the username is specified as the object's owner.
Password	The password used to log in to DocuShare. The password is case-sensitive and must be typed as specified when logging in.
Domain	The organization or entity to which the user is assigned. This field appears if your site uses the LDAP add-on.
Last Name	The user's last name. Users are listed on the DocuShare site by their first and last names.
First Name	The user's first name. Users are listed on the DocuShare site by their first and last names.

Table 2–13: User properties

Property	Description
Email Address	The user's complete email address. User email addresses are available to all DocuShare users, allowing a user to easily contact another user.
Email Format	The email format DocuShare uses to send the mail messages to the user: <b>HTML</b> or <b>Plain Text</b> .
Mail Stop	The user's mailing address or mail stop.
Phone	The user's phone number.
Home Page	The URL of the user's home page, if one is available.
Remote Distinguished Name	Define the name by which external user information is retrieved.
Active User	The active/inactive status of the user account.

# Custom object

---

Use **Object Properties / Custom Object** to create, modify, and delete new object classes for your DocuShare site.

To create a new object class:

1. From the **Administration** menu, click **Object Properties / Custom Object**.

The Custom Object page appears.

2. In the **Name** field, enter a name for your object.

This is the system property name. The name you enter should be all lowercase letters. Do not use special characters, numbers, or spaces.

3. In the **Label** field, enter a label for your object.

This is the property name that appears on the property page. The label you enter may be upper or lower case, and may contain numbers, special characters, and spaces.

4. From the **Clone** menu, select an object class.

Your new object inherits the properties of the object that you select from the Clone menu.

5. Click **Create**.

A property page appears displaying the properties of the custom object that you just created.



**NOTE:** Immediately after you create a custom object class, the property page displays only a few of the properties of the clone. This is normal and indicates that you haven't yet updated the site database. After you click Submit on the Update Properties page, DocuShare adds the custom object class to the site database, so the next time you open the properties page of the new custom object class, all of the properties of the clone will be displayed.

6. Click **Object Properties / Update Properties**.

The Update Properties page appears.

7. Review your changes and if necessary, return to the object property page to modify the changes.
8. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to the property pages of your new object.

To change custom object class properties and default property values:

1. From the **Administration** menu, click **Object Properties / Custom Object**.  
The Custom Object page appears.
2. Select the object you want from the **Custom Objects** menu.
3. Click **Edit**.  
The property page for the custom object appears.
4. To change a property, locate the appropriate property and click **Edit** next to that property.  
A property page appears.
5. Change the appropriate properties on the Edit Property page.  
Click on a property name for information about that property.
6. When you have finished, click **Update**.  
DocuShare saves the changes.
7. When you have finished making changes to the object class, click **Object Properties / Update Properties**.  
The Update Properties page appears.
8. Review your changes and if necessary, return to the object property page to modify the changes.
9. When you are satisfied with your changes, click **Submit**.  
DocuShare saves your changes and applies them to all of the custom object property pages.

To rename a custom object class:



NOTE: **Label** is the name of the custom object as it appears on the object property page. **Name** is system name of the custom object and is used by the DocuShare system. You can change the Label of a custom object, but you cannot change the system Name of a custom object. To change the system Name of a custom object, you must first delete the object and then create a new custom object, giving it a different Name.

1. From the **Administration** menu, click **Object Properties / Custom Object**.

The Custom Object page appears.

2. Select the object you want from the **Custom Objects** menu.
3. Click **Rename**.

The Rename Custom Object page appears.

4. In the **Label** field, enter a new name for the object and click **Apply**.  
DocuShare renames the custom object.

To delete a custom object class:



NOTE: You cannot delete a custom object class if there are instances of that custom object anywhere on your site. You must first locate and delete from your site, all instances of the custom object before you can delete the custom object class.

1. From the **Administration** menu, click **Object Properties / Custom Object**.

The Custom Object page appears.



2. Select the object that you want to delete from the **Custom Objects** menu and click **Edit**.

The custom object property page appears.

3. Click **Delete**.

DocuShare removes the custom object from your site.

## Update properties

---

Use **Object Properties / Update Properties** to review and modify all of the property changes that you made during an object properties editing session. Using Update Properties saves site down time by batching all of your changes into a single update.

To complete your property change session:

1. From the **Administration** menu, **click Object Properties / Update Properties**.

The Update Properties page appears.

2. Review all of your changes and if necessary, return to the property pages for the objects that you modified and make the necessary corrections.
3. When you have finished editing your property changes, click **Submit**.  
DocuShare adds the properties to the selected object property pages.

# 3

## Account management

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## Access policies

Use **Account Management / Access Policies** to control who may enter your DocuShare site and who may create new user and group accounts.

To set site access policies:

1. From the **Administration** menu, click **Account Management / Access Policies**.

The Access Policies page appears.

2. Select who has access to the Registry, to Account Creation, and to Site Access.

Table 3–1: Access policies

Access	Description
Site Access Authority	<b>Guest</b> —Anyone may enter the site. <b>User</b> —Only authenticated registered users may enter the site. <b>Administrator</b> —Only site administrators may enter the site.
Registry Access Authority	<b>Guest</b> —Anyone who connects to your site may view the site registry. <b>User</b> —Only registered users may view the site registry. <b>Administrator</b> —Only site administrators may view the site registry.
Account Creation Authority	<b>Guest</b> —Anyone who connects to your site may create a new user account. <b>User</b> —Only registered users may create new user and group accounts. <b>Administrator</b> —Only site administrators may create new user and group accounts.

3. If you want to return to the saved settings, click **Reset**.
4. When you have finished setting site access permissions, click **Apply**.  
DocuShare saves your changes.

## List users

---

Use **Account Management / Users / List Users** to display an alphabetized list of site users and associated user numbers. **List Users** is a quick way to find out who is registered on your site or in any domain on your site. By clicking any name on the list you can display and edit the properties and password for that user.

To list all of the registered user accounts on your site:

1. From the **Administration** menu, click **Account Management / Users / List Users**.

The List Users page appears, listing the names and user numbers of each user account that is currently in your site registry.

2. From the **Show users from** menu, select a domain.

The List Users page appears, listing the names and user numbers of each user account that is currently in the domain you selected.



**NOTE:** If you have just added an external domain to your DocuShare site and the List Users page is empty when you run **List Users** for that external domain, you need to run **LDAP Accounts / Add** to add external user accounts to the domain.

To view or edit the properties of a specific account that is displayed in the user list:

1. Click any user within the list of names to display the property sheet for that particular user.

The User Services page lists all of the current property values for that user.

2. To edit property values for the user, select a task from the **Edit** menu.



**NOTE:** Passwords and usernames of users assigned to an external domain must be changed by the LDAP administrator at the LDAP server. Using DocuShare to change an external account password or username will prevent user authentication the next time the user attempts to log into DocuShare.

Table 3–2: Edit menu

Menu item	Description
Edit properties	Edit the content of any user property field.
Change domain	Change the domain of the user.
Change user name	Change the username. For external domain accounts, make this change at the LDAP server.
Change password	Change the password of the user. Passwords are case sensitive. For external domain accounts, make this change at the LDAP server.
Delete	Delete the user account from the site.

3. When you have selected a task from the **Edit** menu, click **Go**.  
A task User Services page appears.
4. Edit the appropriate fields on the User Services page.
5. When you have finished editing the User Services page, click **Apply**.  
DocuShare saves your changes to the user properties.
6. From the Administration menu click **Account Management / Users / List Users** to return to the List Users page.

## Find user

---

Use **Account Management / Users / Find User** to locate a specific registered user on your site.

To find a specific user on your site:

1. From the **Administration** menu, click **Account Management / Users / Find User**.

The Find User page appears.

2. Fill in as many search fields as possible.

Table 3–3: Find user

Property	Description
First Name	The user's first name.
Last Name	The user's last name.
Username	The user's registered username.
Domain	The organization or entity to which the user is assigned. This field appears if your site uses the LDAP add-on.
Phone	The user's phone number.
Home Page	The URL to the user's home page.
Mail Stop	The user's mail stop.

3. If you want to clear all of the fields, click **Reset**.
4. When you have finished filling in the fields, click **Find**.

A page appears displaying the results of your search.



To view or edit the properties of the displayed user:

1. Click the username to display the User Services page.  
The User Services page lists all of the current property values for that user.
2. To edit property values for the user, select a task from the **Edit** menu.



**NOTE:** Passwords and usernames of users assigned to an external domain must be changed by the LDAP administrator at the LDAP server. Using DocuShare to change an external account password or username will prevent user authentication the next time the user attempts to log into DocuShare.

Table 3–4: Edit menu

Menu item	Description
Edit properties	Edit the content of any property field.
Change domain	Change the domain of the user.
Change username	Change the username. For external domain accounts, make this change at the LDAP server.
Change password	Change the password of the user. Passwords are case sensitive. For external domain accounts, make this change at the LDAP server.
Delete	Delete the user account from the site.

3. When you have selected a task from the Edit menu, click **Go**.  
A task User Services page appears.
4. Edit the appropriate fields on the User Services page.
5. When you have finished editing the User Services page, click **Apply**.  
DocuShare saves your changes to the user properties.

# Add user

Use **Account Management / Users / Add User** to create new user accounts on any internal domain on your site. Although DocuShare users can create their own user account, there may be times when that task falls to the administrator.



NOTE: To add a new user account to an external domain, you must go directly to the LDAP server. You cannot use **Add user** to create a new external domain user account.

To create a new user account on and internal domain:

1. From the **Administration** menu, click **Account Management / Users / Add User**.

The Add User page appears.

2. Fill in all of the appropriate fields.

Some fields are labeled "required". DocuShare will not create a new user account if you do not enter information into a required field.

See [Table 3–5](#) for property field content information.

Table 3–5: User properties

Property	Description
Username	Required—The name used to log in to DocuShare. When creating objects, the username is specified as the object's owner.
Password	Required—The password used to log in to DocuShare. The password is case-sensitive.
Password Confirm	Required—Re-type the password so DocuShare can confirm that it was typed correctly. The password is case-sensitive.
First Name	The user's first name. Users are listed on the DocuShare site by their first and last names.

Table 3–5: User properties

Property	Description
Last Name	Required—The user's last name. Users are listed on the DocuShare site by their first and last names.
Domain	The organization or entity to which the user is assigned. This field appears if your site uses the LDAP add-on.
Email Address	The user's complete email address. For example: docushareuser@mycompany.com. User email addresses are available to all DocuShare users, allowing a user to easily contact another user.
Email Format	The email format that DocuShare uses to send mail messages to the user: <b>HTML</b> or <b>Plain Text</b> .
Phone	The user's phone number.
Home Page	The URL of the user's home page.
Mail Stop	The user's mailing address or mail stop.

3. If you want to clear all of the fields, click **Reset**.
4. When you have completed entering information for the new user account, click **Apply**.

DocuShare adds the new user account to the site registry.

# Merge accounts

---

Use **Account Management / Users / Merge Accounts** to combine duplicate user accounts into a single user account. Before deleting the other accounts, the DocuShare account unification process takes all objects assigned to the selected accounts and moves them into the single account that you are retaining. The single account now contains all of the objects that were originally assigned to the deleted accounts.

To merge multiple accounts:

1. From the **Administration** menu, click **Account Management / Users / Merge Accounts**.

The Merge Accounts page appears.

2. From the **Add Accounts** field, select the accounts that you want to merge into one combined account.
3. Click **Update Account List**.

The Unify Redundant Account table appears, displaying information for all of the accounts that you selected.

4. In the **Merge Into** row of the table, select the radio button next to the account that you want to retain as the main account.

When you merge accounts, DocuShare deletes all of the accounts except the one you selected as the main account. All of the information contained within the accounts is transferred to the main account.

5. Click **Edit**.

The Select Accounts to be Merged page appears listing the accounts still available (Add Accounts) and the accounts that you selected to merge (Remove Accounts).

6. If there is an account listed in the **Remove Accounts** field that you do not want to merge, then select that account and click **Update Account List**.

DocuShare moves that account from the **Remove Accounts** field, back to the Add Accounts menu. That account is no longer selected to be merged.

7. If there are accounts listed in the **Add Accounts** field that you want to include in the merge list, then select that account and click **Update Account List**.

DocuShare moves that account from the **Add Accounts** field to the Remove Accounts menu. That account is selected to be merged with the other accounts that you have selected.

8. When you are satisfied with the merge list, click **Update Account List**.

The Unify Redundant Account table reappears, displaying information for all of the accounts that you selected.

9. In the **Merge Into** row of the table, make sure the radio button that you select is next to the account that you want to retain as the main account.
10. If you are ready to merge all of the accounts into the one account that you selected in the Unify Redundant Account table, click **Merge Accounts**.

The Merge Results page appears, verifying the accounts that were removed and the account retained.

11. When you have completed merging accounts, enter the DocuShare server command prompt.
12. At the command prompt enter and run the appropriate **dsindex** command line to rebuild the search indices.

The generic command is **dsindex index\_all**, but you may build on this command with arguments from the table below.



**NOTE:** If you do not rebuild the search indices, DocuShare includes the deleted account names whenever you run an account search.

## Dsindex syntax

```
dsindex [-q] [-f] index_all | max_clean | optimize
```

Table 3–6: Dsindex syntax arguments

Argument	Meaning
[-q]	Sets the dsindex command to execute without prompting the user for information. Useful when running automated maintenance scripts.

Table 3–6: Dsindex syntax arguments

Argument	Meaning
<code>[-f]</code>	Sets the dsindex command to run in the foreground. Although foreground processing is slower than background processing, setting the <code>-f</code> allows you to view the operation as it happens. Without the <code>-f</code> , dsindex runs in the background.
<code>index_all</code>	<p>Sets the dsindex command to completely rebuild the indices based on the current content of your DocuShare server.</p> <ul style="list-style-type: none"> <li>• Add this element to the dsindex command if you added custom properties to your site.</li> <li>• DocuShare can be either running or stopped when you run dsindex <code>index_all</code>. However, if you have the DocuShare Oracle-enabled edition, DocuShare must be running when you run dsindex <code>index_all</code>.</li> </ul>
<code>max_clean</code>	Sets the dsindex command to merge redundant partition files into the smallest possible number of partition files. Under normal conditions, this element is not needed. Verity Service is designed to automatically optimize partition files.
<code>optimize</code>	Sets the dsindex command for maximum efficiency, but does not alter or remove redundant index partitions. Under normal conditions, this element is not needed.

## Account activity

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Use **Account Management / Users / Account Activity** to display a report of the last time each user, including the Guest account, logged into the site.

To view the account activity report:

1. From the **Administration** menu, click **Account Management / Users / Account Activity**.

The Account Activity page appears.

2. Select the appropriate **Sort Order** from the menu.
3. Click **View Report**.

DocuShare generates a list of each site user and when they last logged into the site. DocuShare displays the list in the sort order that you selected in step 2.

To view or edit the properties of a specific user account that is displayed in the report:

1. Click any user listed in the report to bring up the property sheet for that particular user.

The property sheet lists all of the current property values set for that user.

2. To edit property values for the user, select a task from the **Edit** menu.

Table 3–7: Edit menu

Menu item	Description
Edit properties	Edit the content of any property field.
Change username	Change the username.
Change password	Change the user password. Passwords are case sensitive.
Delete	Delete the user account from the site.

3. When you have selected a task from the Edit menu, click **Go**.

The User Services page appears.

4. Edit the appropriate fields on the User Services page.
5. When you have finished editing the User Services page, click **Apply**.  
DocuShare saves your changes to the user properties.



## List groups

---

Use **Account Management / Groups / List Groups** to display a list of site groups and associated group numbers. List Groups is a quick way to find out what groups are registered on your site on in any domain on your site. By clicking any group on the list you can display and edit the properties of that group.

To list all of the registered group accounts on your site:

1. From the **Administration** menu, click **Account Management / Groups / List Groups**.

The List Groups page appears, listing the name and group number of each group account that is currently in your site registry.

2. From the **Show groups from** menu, select a domain.

The List Group page appears, listing the name and group number of each group account that is currently in the domain you selected.

To view or edit the properties of a specific account that is displayed in the group list:

1. Click any group within the list to display the property sheet for that particular group.

The Group Services page lists all of the current property values for that group.

2. To edit property values for the group, select a task from the **Edit** menu.

Table 3–8: Edit menu

Task	Description
Edit Properties	Edit the content of any property field.
Change Owner	Change the owner of the group.
Change Domain	Change the domain of the group.
Mail To	Send email to all members of the group.
Delete	Delete the group account from the site.

3. When you have selected a task from the **Edit** menu, click **Go**.  
A task Group Services page appears.
4. Edit the appropriate fields on the task Group Services page.
5. If you want to return to the saved settings, click **Reset**.
6. When you have finished editing the Group Services page, click **Apply**.  
DocuShare saves your changes to the group properties.
7. From the **Administration** menu click **Account Management / Groups / List Groups** to return to the List Groups page.

## Add group

---

Use **Account Management / Groups / Add Group** to create a new group account on any internal domain on your site. Although registered users can create their own group accounts, there may be times when that task falls to the administrator.



**NOTE:** To add a new group account to an external domain, you must go directly to the LDAP server. You cannot use Add group to create a new external domain group account.

To create a new group account:

1. From the **Administration** menu, **click Account Management / Groups / Add Group**.

The Add Group page appears.

2. Fill in all of the appropriate fields.

Some fields are labeled "required". DocuShare will not create a new group account if you do not enter information into a required field.

See [Table 3–9](#) for property field content information.

Table 3–9: Group properties

Property	Description
Title	Required—The title of the group. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Summary	A short description of the group. The summary appears below the group's title.
Description	A detailed description of the group. You can include HTML tags in the object's description. For container objects, the description appears below the title.

Table 3–9: Group properties

Property	Description
Keywords	One or more words to associate with the group. Keywords help to categorize objects and can be used to find objects in a search. Separate words with a comma.
Domain	The organization or entity to which the group belongs. This field appears if your site uses the LDAP add-on.
Change Membership	Select <b>Owner</b> so only the owner of the group can change group membership. Select <b>Members</b> so current group members can change the group membership.
Members	Select the members of the new group. Additional members can be added later.

3. If you want to clear all of the fields, click **Reset**.
4. When you have completed entering information for the new group, click **Apply**.

DocuShare adds a new group account to the site registry.

# Domains

---

Use **Account Management / Domains** to add, edit, or delete internal and external domains. DocuShare supports the use of multiple domains, either domains internal to your site, or domains external to your site, or a combination of both.

**DocuShare** is the default name of the system internal domain. You cannot delete the system internal domain. However, you can change the default name from DocuShare to any unique name.

## Internal domains

Domains that reside on your DocuShare site. By default, internal domains use DocuShare as their authentication and directory service provider.

To create a new internal domain:

1. From the **Administration** menu click **Account Management / Domains**.  
The Domains page appears.
2. Enter a unique name for the new domain in the **Domain Name** field.
3. Select **DocuShare/DocuShare** from the **Providers** menu.
4. Click **Add**.

DocuShare creates a new local domain. This domain now appears in all Domain menus on your site. Users may now create new accounts in the domain.

To edit an internal domain:

1. From the **Administration** menu click **Account Management / Domains**.  
The Domains page appears.
2. Click **Edit** next to the internal domain that you want to edit.  
The Edit Domain page appears.
3. Edit either or both the **Domain Name** and the **Provider**.
4. Click **Update**.

DocuShare saves the changes.

To delete an internal domain:

1. From the **Administration** menu click **Account Management / Domains**.

The Domains page appears.

2. Click **Delete** next to the domain that you want to delete.

The Delete Domain page appears.

3. Select either:

- **Remove users and groups** to delete the domain and all of the users and groups that are registered in the domain.

If any user registered in this domain owns objects on the site, DocuShare prompts you to correct ownership issues before deleting the domain.

- **Transfer users and groups to**, and select a new internal domain from the menu.

4. Click **Apply**.

DocuShare deletes the domain, and if selected, transfers all accounts registered in that internal domain, to another internal domain.

## External domains

Domains that reside on a separate and properly configured LDAP server. Using the DocuShare Administrator **Domains** tool to add a new external domain, does not actually create a new domain. It merely adds to your site registry, a pointer to a domain that you have created on an LDAP server.

To add a new external domain:

1. Go to **Account Management / LDAP Configuration** to setup DocuShare so it can connect to a specific LDAP server.
2. Go to **Account Management / Providers / Security Services** and select **LDAP** as the external provider.
3. Go to **Account Management / Providers / Directory Services** and select **LDAP** as the external provider.

4. Use LDAP administrator tools to create the new domain on the LDAP server.

You cannot use DocuShare admin tools to create domains on the LDAP server.

5. From the DocuShare **Administration** menu click **Account Management / Domains**.

The Domains page appears.

6. Enter the name of the LDAP domain, in the **Domain Name** field.
7. Select **LDAP/LDAP** from the **Providers** menu.
8. Click **Add**.

DocuShare adds the domain name to your local site registry. This domain now appears in all Domain menus on your site.

9. Go to **LDAP - Add** in this guide to populate the domain with external domain user and group accounts.

To edit an external domain:

1. Use LDAP administrator tools to edit any existing domain on the LDAP server.
2. From the **Administration** menu click **Account Management / Domains**.

The Domains page appears.

3. Click **Edit** next to the external domain that you want to edit.

The Edit Domain page appears.

4. Edit the page fields as needed.

Changes you make to this page affect your local pointer, they do not affect the domain properties on the LDAP server.

5. Click **Update**.

DocuShare saves the changes.

To delete an external domain:

1. From the **Administration** menu click **Account Management / Domains**.

The Domains page appears.

2. Click **Delete** next to the external domain that you want to delete from your local site.

The Delete Domain page appears.

3. Select either:
  - **Remove users and groups** to delete the domain and all of the users and groups that are registered in the domain. If any user registered in this domain owns objects on the site, DocuShare prompts you to correct ownership issues before deleting the domain.
  - **Transfer users and groups to**, and select an internal domain from the menu. DocuShare does not allow you to transfer users and groups in an external domain to another external domain.
4. Click **Apply**.

DocuShare deletes the domain pointer from your local site, and if selected, transfers all users and groups registered in that external domain, to an internal domain. DocuShare does not delete the original external domain. That domain still resides on the LDAP server.



## LDAP configuration

Use **Account Management / LDAP Accounts / Configuration** to setup your DocuShare site to use an external LDAP server. If you have licensed your DocuShare site to enable the LDAP add-on, you may now use the DocuShare external domains feature. You may use multiple LDAP hosts, but each host must contain the same directory information tree.

To configure your site to communicate with an LDAP server:

### Basic configuration

1. From the **Administration** menu click **Account Management / LDAP Accounts / Configuration**.

The LDAP configuration page appears.

2. Fill in all of the appropriate fields.

See [Table 3–10](#) for LDAP field content information.

Table 3–10: Basic LDAP configuration properties

Property	Description
Host(s)	A comma separated set of replicated servers each serving the same directory information tree (DIT).
Port	The port number of the LDAP connection.
Use SSL	Select to enable a secure connection through SSL.
SSL Port	The SSL port number for a secure connection.
DIT Root	The Directory Information Tree Root of the LDAP name space; ou=MyDepartment, ou=MyDivision, o=MyCompany.
Search Scope	Select the LDAP search from three scopes; <b>Object</b> , <b>One Level</b> , and <b>Sub-Tree</b> .
User RDN Key	The Relative Distinguished Name Key. The distinguished name (DN) equals the RDN + name space; uid=name space.

Table 3–10: Basic LDAP configuration properties

Property	Description
System Agent	Select a System Agent that is either <b>Anonymous</b> or <b>Agent</b> .
Agent DN	Agent distinguished name.
Agent Password	Agent password.

3. If you want to return to the saved settings, click **Reset**.
4. When you have finished editing the LDAP configuration fields, click **Apply**.

DocuShare saves the LDAP configuration information.

5. Proceed to Test LDAP Connection.

## Test LDAP Connection

1. In the Test LDAP Connection section of the LDAP Configuration page, enter the required information into the fields.

See [Table 3–11](#) for LDAP field content information.

Table 3–11: Test LDAP Connection properties

Property	Description
Connecting DN	Make the LDAP connection using the DN of <b>Anonymous</b> , <b>Agent</b> , <b>User</b> . If you select User, you must supply a username and password.
Name	Agent distinguished name.
Password	Agent Password

2. When you have finished entering the information, click **Test LDAP Connection**.  
DocuShare sends a message to the LDAP server and the LDAP server returns a message to DocuShare. The message lets you know if the test succeeded or if it failed.
3. If the test succeeded, proceed to **Advanced LDAP Configuration**.

## Advanced LDAP configuration

Use **Advanced LDAP configuration** to enhance LDAP operations. You may add filters to block select users from accessing your site. You may configure LDAP so whenever a user logs into the site, LDAP automatically synchronizes the local account information to the user account and associated group account information that is on the LDAP server.

1. At the bottom of the LDAP Configuration page, click **Advanced**.

The LDAP Advanced Configuration page appears.

2. Fill in all of the appropriate fields.

See [Table 3–12](#) for LDAP Advanced field content information.

Table 3–12: Advanced LDAP configuration properties

Property	Description
Authentication Control	Select who controls authentication, the <b>user</b> or the <b>agent</b> .
Enable User Access Control	Enter a user filter that controls access to a DocuShare server that is based on LDAP data.
Enable User Privacy Control	Enter a filter that supports filtered authentication for privacy sensitive authentication.
Synchronization User	Mirror DocuShare properties with LDAP attributes. <b>Enable On Login</b> - Synchronize DocuShare user properties with their corresponding LDAP attributes whenever the user logs in. <b>Enable Automatic Account Creation</b> - Enable automatic user account creation whenever the user logs in. <b>Enable Automatic Account Removal</b> - Enable automatic user account removal whenever the user attempts to log in..

Table 3–12: Advanced LDAP configuration properties

Property	Description
Synchronization Group	<p>Synchronize DocuShare group properties with the corresponding LDAP group attributes.</p> <p><b>Enable Group Synchronization</b> - Synchronize groups whenever user synchronization occurs.</p> <p><b>Enable Dynamic Groups</b> - When adding an LDAP user to DocuShare, automatically create the user's groups as well.</p> <p><b>Enable Group Search Control</b> - Enter an LDAP search filter that controls the search of a DocuShare server based on LDAP data.</p> <p><b>Enable Automatic Group Creation</b> - Enable automatic group account creation whenever a member of the group logs in.</p> <p><b>Enable Automatic Account Removal</b> - Enable automatic group account removal whenever a member of the group logs in.</p>

- 3. If you want to return to the saved settings, click **Reset**.
- 4. When you have finished editing the LDAP advanced configuration fields, click **Apply**.

DocuShare saves the LDAP advanced configuration information.

## LDAP - Add

---

Use **Account Management / LDAP Accounts / Add** to select and add to your local external domain pointer, all or some of the accounts that exist in the external domain on the LDAP server. **Add** is an excellent way for the DocuShare administrator to control which users in an external domain have access to a DocuShare site. Not including an account in the **Add** operation excludes that user from accessing your site.

To add external domain user and group accounts to the local listing for an external domain:

1. Make sure you have first created the new external domain for your site. Refer to [Domains on page 3–19](#).

2. From the **Administration** menu click **Account Management / LDAP Accounts / Add**.

The Add page appears. Note that this is not the same page as the Add User page or the Add Group page.

3. Choose either the **By User** or the **By Group** section of the page.
4. From the **Domain** menu, select the domain that contains the user or group accounts that you want to add to your local DocuShare site.
5. Click **Go**.

All of the user or group accounts for the selected external domain appear in the **User** field or the **Group** field.

6. Select the accounts that you want to add to the local listing of the external domain.
7. Click **Add**.

DocuShare adds the external domain user or group accounts to the local listing of the external domain.

8. Run **Account Management / List Users** to see the list of users now assigned to the domain.

## LDAP - Convert

---

Use **Account Management / LDAP Accounts / Convert** to convert an internal domain user account to an external domain user account, or to convert an external domain user account to an internal domain user account.

To convert a single user from an internal domain account to an external domain account:

1. Use the LDAP server administration UI to create a new user account in a specific external domain.
2. From the **Administration** menu click **Account Management / LDAP Accounts / Convert**.

The Convert page appears.

3. In the **Single User** area of the page, select from the **From DocuShare** menu the domain where the internal user account is currently registered.
4. Click **Go**.

The **User** menu displays the accounts that are currently a part of the selected internal domain.

5. From the **User** menu, select the user account that you want to convert to the external domain account that you have created on the LDAP server.
6. Select from the **To LDAP** menu the external domain where you created the new external domain user account.
7. Click **Convert**.

DocuShare changes the registry to show that the selected internal domain user account is now registered as an external domain user account. When you run **List Users** for the external domain, you will see the user account listed.

To convert several users from an internal domain account to an external domain account:

1. Use the LDAP server administration UI to create new user accounts in a specific external domain.
2. From the **Administration** menu click **Account Management / LDAP Accounts / Convert**.

The Convert page appears.

3. In the **Multi-User** area of the page, select from the **From DocuShare** menu the domain where the internal user accounts are currently registered.
4. Click **Go**.

The **User** menu displays the accounts that are currently a part of the selected internal domain.
5. Click either **All** to convert all the accounts listed or **Select** to select only those accounts that you want to convert.
6. If you have clicked **Select**, then from the **User** menu, select the user accounts that you want to convert to the external domain accounts that you have created on the LDAP server.
7. Select from the **To LDAP** menu the external domain where you created the new external domain user accounts.
8. In the **Matching Criteria** area of the page select **Username** if you want the conversion to match account username internal to account username external, or select **Property** and fill in the field with an account property, such as Last Name, if you want the conversion to match account last names internal to account last names external.
9. Click **Convert**.

DocuShare changes the registry to show that the selected internal domain user accounts are now registered as an external domain user accounts. When you run **List Users** for the external domain, you will see the user accounts listed.

To convert a single user from an external domain to an internal domain:

1. From the **Administration** menu click **Account Management / LDAP Accounts / Convert**.

The Convert DocuShare User page appears.
2. In the **Single User** area of the page, select from the **From LDAP** menu the external domain where the user account is currently registered.
3. Click **Go**.

The **User** menu displays the accounts that are currently a part of the selected external domain.

4. From the **User** menu, select the user account that you want to move to an internal domain.
5. Select from the **To DocuShare** menu the internal domain where you want to move the selected user account.
6. Enter your DocuShare admin password in the **Password** field.
7. Reenter your DocuShare admin password in the **Confirm** field.
8. Click **Convert**.

The selected external user account is now part of the selected internal domain.



**NOTE:** Although the user account is now part of an internal domain, the account has not been actually been deleted from the external domain. If you want to purge the account, the LDAP administrator must manually delete the account from the LDAP server.



## LDAP - Rename

---

There may be times when you want to change the username or the domain of a user account that is assigned to an external domain. For instance, you would use **Rename** if a user wanted to change his username from Bob to Robert, or if the user Bob was moved from the Marketing domain to the Staff domain. Use **Account Management / LDAP Accounts / Rename** to make these changes to the local user account property information so it corresponds to the changes that were made to the account at the LDAP sever.

To change the user name or domain of an existing external user account:

1. Use the LDAP server administration UI to give the user a new username or to move the user account into a different external domain.
2. From the **Administration** menu click **Account Management / LDAP Accounts / Rename**.

The Rename page appears.

3. From the **From Old Name** section, select from the **Domain** menu the external domain that contains the user account that you want to rename.
4. Click **Go**.

The **User** menu displays the accounts that are currently in the selected external domain.

5. Select from the From Old Name **User** menu the user account that you want to rename or move.
6. From the **To New Name** section, select from the **Domain** menu the external domain that contains the user account that you have renamed or moved.
7. Click **Go**.

The **User** menu displays the accounts that are currently in the selected external domain.

8. Select from the To New Name **User** menu the user account that you have renamed.
9. Click **Rename**.

DocuShare changes the local registry to show the new external username and/or new external domain.

## LDAP - Synchronize

---

Use Account Management / LDAP Accounts / Synchronize to synchronize local user and group account property information with account property changes that were made at the LDAP sever.



NOTE: Refer to **Advanced LDAP configuration**, in the **LDAP configuration** section of this chapter, for information on setting up your site so user and group accounts perform auto-synchronization at login.

To synchronize local account information with LDAP account information:

1. Use the LDAP server administration UI to make changes to the properties of an external account.
2. From the **Administration** menu click **Account Management / LDAP Accounts / Synchronize**.

The Synchronize page appears.

3. Using either **By User** or **By Group**, select from the Domain menu the external domain that contains the changed accounts.
4. Click **Go**.

The **User** menu or the **Group** menu display the accounts that are currently assigned to that external domain.

5. If you want to synchronize all of the user or all of the group accounts, click **Synchronize All**.

The LDAP server updates the selected user or group account properties on your local site.

6. If you want to synchronize specific accounts, then select those accounts from the **User** menu or the **Group** menu, and click **Synchronize Users(s)** or **Synchronize Group(s)**.

The LDAP server updates all of the specified user or group account properties on your local site.

## LDAP - Bind user

Use **Account Management / LDAP Accounts / Bind User** to set LDAP attributes and DocuShare properties for the entire User object class. DocuShare treats any field containing a correctly constructed LDAP attribute entry as an LDAP property. DocuShare treats any field left empty as a user editable DocuShare property.

To use Bind User:

1. From the **Administration** menu click **Account Management / LDAP Accounts / Bind User**.

The User Property Map page appears.

2. Enter a correctly constructed LDAP attribute in the **LDAP Attribute** field if you want that corresponding DocuShare property to become an LDAP attribute.

Any LDAP Attribute field left empty indicates that DocuShare should treat that property as a user editable DocuShare property.

Table 3–13: Bind user properties

Property	Description
First Name	The first name of the user. The LDAP attribute is <b>givenName</b> .
Last Name	The last name of the user. The LDAP attribute is <b>sn</b> .
Username	The login name of the user.
Email Address	The email address of the user.
Mail Stop	The mail stop of the user.
Phone	The phone number of the user.
Home Page	The home page of the user.
Remote Distinguished Name	The name by which external user information is retrieved.

3. When you have completed filling in the fields, click **Apply**.  
DocuShare saves your changes.

## LDAP - Bind group

Use **Account Management / LDAP Accounts / Bind Group** to establish LDAP attributes and DocuShare properties for the entire Group object class. DocuShare treats any field containing a correctly constructed LDAP attribute entry as an LDAP property. DocuShare treats any field left empty as a user editable DocuShare property.

To use Bind Group:

1. From the **Administration** menu click **Account Management / LDAP Accounts / Bind Group**.

The Group Property Map page appears.

2. Enter a correctly constructed LDAP attribute in the **LDAP Attribute** field if you want that corresponding DocuShare property to become an LDAP attribute.

Any LDAP Attribute field left empty indicates that DocuShare should treat that property as a user editable DocuShare property.

Table 3–14: Bind Group properties

Property	Description
Title	The title of the object. The title should be short, but descriptive, and can contain spaces and punctuation marks.
Description	A detailed description of the object. You can include HTML tags in the object's description. For container objects, the description appears below the title.
Summary	A short description of the object. The summary appears below the object title.
Keywords	One or more words to associate with the object. Keywords help to categorize objects and can be used to find objects in a search. Separate keywords with a comma.

3. When you have completed filling in the fields, click **Apply**.

DocuShare saves your changes.

## Security services

---

Use **Account Management / Providers / Security Services** to select LDAP as the authentication service provider for all external domains used by your site. DocuShare is your default internal authentication service and cannot be changed.

To select LDAP as your external authentication service provider:

1. From the **Administration** menu click **Account Management / Providers / Security Services**.

The Security Services page appears.

2. Select **LDAP** to enable LDAP as your external authentication provider.
3. Click **Apply**.

DocuShare saves your changes. LDAP now appears as a menu item on the Account Management / Domain page.

4. If you have not already done so, go to the **Directory services** section of this chapter and enable LDAP as your external directory services provider.

## Directory services

---

Use **Account Management / Providers / Directory Services** to select LDAP as the directory service provider for all external domains used by your site. DocuShare is your default internal directory service and cannot be changed.

To select LDAP as your external directory service provider:

1. From the **Administration** menu click **Account Management / Providers / Directory Services**.

The Directory Services page appears.

2. Select **LDAP** to enable LDAP as your external directory provider.
3. Click **Apply**.

DocuShare saves your changes. LDAP now appears as a menu item on the Account Management / Domain page.

4. If you have not already done so, go to the **Security services** section of this chapter and enable LDAP as your external security services provider.

# 4

## Services

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# Conversion server

Use **Services / Conversion / Conversion Server** to set the logging level of the DocuShare Conversion Service.

To edit conversion server properties:

- 1. From the **Administration** menu, click **Services / Conversion / Conversion Server**.

The Conversion Server Service Properties page appears.

- 2. Select a logging level from the menu.

See [Table 4–1](#) for logging level information.

Table 4–1: Conversion server properties

Property	Description
Logging Level	The monitor service will record various information during execution based on the logging level. Logging levels are listed in ascending order of priority with information recorded only for levels equal or greater than the selected logging level. For example, the DEBUG level will result in the recording of information for all levels throughout the system whereas ERROR will only trigger ERROR, LETHAL and FATAL levels to be logged.

- 3. If you want to return to the saved settings, click **Reset**.
- 4. If you want to save your changes, click **Apply**.

DocuShare saves your Conversion Server settings.



## Image conversion

---

Use **Services / Conversion / Image Conversion** to edit the image properties for the DocuShare Conversion Service. Image conversion properties allow you to specify the width and height of the converted files.

To edit image conversion properties:

1. From the **Administration** menu, click **Services / Conversion / Image Conversion**.

The Image Conversion Service Properties page appears.

2. Enter a value for each of the properties.

See [Table 4–2](#) for Image Conversion Service property field information.

Table 4–2: Image conversion properties

Property	Description
Thumbnail Image Width	The thumbnail image width measured in pixels.
Thumbnail Image Height	The thumbnail image height measured in pixels.

3. If you want to return to the saved settings, click **Reset**.
4. If you want to save your changes, click **Apply**.

DocuShare saves your image conversion settings.

# Notification

Use **Services / Notification** to set the logging level of the DocuShare Notification Service.

To set the notification service logging level:

- 1. From the **Administration** menu, click **Services / Notification**.  
The Notification Service Properties page appears displaying the currently assigned logging level values.
- 2. Select a logging level from the menu.  
See [Table 4–3](#) for logging level information.

Table 4–3: Notification properties

Property	Description
Logging Level	The monitor service will record various information during execution based on the logging level. Logging levels are listed in ascending order of priority with information recorded only for levels equal or greater than the selected logging level. For example, the DEBUG level will result in the recording of information for all levels throughout the system whereas ERROR will only trigger ERROR, LETHAL and FATAL levels to be logged.

- 3. If you want to return to the saved settings, click **Reset**.
- 4. If you want to save your changes, click **Apply**.  
DocuShare saves your notification changes.

# Monitor

---

Use **Services / Monitor** to set the Logging Level for the DocuShare Monitor Service. The Monitor Service oversees the operation of the Verity Service and Notification Service.

To edit monitor service Logging Level:

1. From the **Administrator** menu, click **Services / Monitor**.  
The Monitor page appears.
2. Select a logging level from the **Logging Level** menu.  
See [Table 4–4](#) for logging level information.

Table 4–4: Monitor properties

Property	Description
Logging Level	The monitor service records information based on the logging level that you select. Logging levels are listed in ascending order of priority with information recorded only for levels equal or greater than the selected logging level. For example, the DEBUG level will result in the recording of information for all levels throughout the system whereas ERROR will only trigger ERROR, LETHAL and FATAL levels to be logged.

3. If you want to return to the saved settings, click **Reset**.
4. If you want to save your changes, click **Apply**.  
DocuShare saves your Monitor settings.

# Search

Use **Services / Search** to edit the properties of the Verity search and filtering programs that are used by DocuShare.

To edit search properties:

- 1. From the **Administration** menu, click **Services / Search**.  
The Search page appears displaying the current search property values.
- 2. Edit the values of the search properties.  
See [Table 4–5](#) for search property information.

Table 4–5: Search properties

Property	Description
Default Locale	The default locale for the Verity application that is used for indexing documents. The default locale is based on locales installed with Verity application.
Default Character Map Driver	The default character set encoding Verity application should use when indexing files.
Verity Collection Directory	Directory location where Verity index files and related metadata are stored.
Verity Log Level	The logging level for Verity application
Search Service Log Level	Based on the logging level that you select, the search service records information during execution. Logging levels are listed in ascending order of priority with information recorded only for levels equal or greater than the selected logging level. For example, the DEBUG level will result in the recording of information for all levels throughout the system whereas ERROR will only trigger ERROR, LETHAL and FATAL levels to be logged.

Table 4–5: Search properties

Property	Description
Search Limit	The maximum number of search results that Verity search engine will return.
Maximum Memory (kb)	The maximum amount of memory allotted to the Verity search engine. The search engine may occasionally exceed the specified amount.
Maximum Files	The maximum number of temporary files allotted to the Verity search engine. The search engine may occasionally exceed the specified amount.

3. If you want to return to the saved settings, click **Reset**.
4. If you want to save your search changes, click **Apply**.

DocuShare saves your search changes.

## Subscription

---

Use **Services / Subscription** to enable the DocuShare subscription feature and to set Subscription properties.

To set the subscription properties:

1. From the **Administration** menu, click **Services / Subscription**.  
The Subscription page appears displaying the current Subscription properties.
2. Edit the subscription property values.  
See [Table 4–6](#) for subscription property information.

Table 4–6: Subscription properties

Property	Description
Logging Level	Based on the logging level you select, the subscription service records information during execution. Logging levels are listed in ascending order of priority with information recorded only for levels equal or greater than the selected logging level. For example, the DEBUG level will result in the recording of information for all levels throughout the system whereas ERROR will only trigger ERROR, LETHAL and FATAL levels to be logged.
SMTP Mail Gateway	To send users email notifications, the DocuShare Subscription Service requires the address of an SMTP Gateway used to send the email messages. A sample SMTP Gateway address would be mailhost.im.acme.com.
SMTP Mail Port	The port number used by the SMTP Mail Gateway. The default port is 25.
Daily Notification Hour	The hour of the day (0-23) when the Subscription Service sends a daily email notification.

Table 4–6: Subscription properties

Property	Description
Daily Notification Minute	The minute of the hour (0-59) when the Subscription Service sends a daily email notification.
Weekly Notification Day	The day of the week when the Subscription Service sends a weekly email notification.
Weekly Notification Hour	The hour of the day (0-23) when the Subscription Service sends a weekly email notification.
Weekly Notification Minute	The minute of the hour (0-59) when the Subscription Service sends a weekly email notification.
Subscription Administrator Email	The email address of the user who is designated the subscription administrator.
Enable Subscriptions	<b>Yes</b> enables subscription. <b>No</b> disables subscription.

3. If you want to return to the saved settings, click **Reset**.
4. If you want to save your subscription changes, click **Apply**.

DocuShare saves your subscription changes.

To send a test subscription message:

1. Make sure you have entered the valid email address of the site administrator in the email address field located at the bottom of the subscription fields.
2. Click **Send Test Message**.

The Subscription Service sends a test email message to the site administrator.





# 5

## Content management

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# List orphans

Use **Content Management / List Orphans** to locate and reassign orphaned objects within your site. Any DocuShare object can become orphaned and lose its association with the rest of the site.

To locate, reassign, or delete orphaned objects:

- 1. From the **Administration** menu, click **Content Management / List Orphans**.

The List Orphans page appears.

- 2. Click **List**.

The Orphaned Content page appears, listing all of the orphaned objects found on your DocuShare site.

- 3. On the Orphaned Content page, **check the box** next to the orphaned object or objects that you want to delete or reassign.

- 4. From the **Resolve Orphans** menu, select one of the following:

Table 5–1: Resolve Orphans menu

Menu Item	Description
Delete All	Delete all of the orphaned objects that are listed on the Orphaned Content page.
Delete Selected	Delete only the checked orphaned objects that are listed on the Orphaned Content page.
Reassign All	Edit the location of all of the orphaned objects that are listed on the Orphaned Content page.
Reassign Selected	Edit the location of only the checked orphaned objects that are listed on the Orphaned Content page.



**CAUTION:** If you select either **Delete All** or **Delete Selected**, as soon as you click **Go**, DocuShare deletes the selected orphans. If you accidentally delete an orphaned object, you can recover the object if you have enabled the trashcan. Refer to [Trashcan contents on page 5–6](#) for instructions on recovering deleted objects.

5. Click **Go**.

Depending on what menu item you selected, either a **Move Orphans To** page or a **Delete Orphans** page appears.

6. Follow the instructions on the **Delete Orphans** page to either move the orphans to an existing collection or delete the orphans from the site.

## Repository use

---

Use **Content Management / Repository Use** to have DocuShare generate a customized site repository use report. This report lists each registered user on your site, the number of objects they own, and the total disk space those objects occupy.

To generate a customized site repository use report:

1. From the **Administration** menu, click **Content Management / Repository Use**.  
The Repository Use page appears.
2. In the **Include in Report** menu select the options you want for the report.
3. When you have finished selecting the options, click **Generate Report**.  
DocuShare generates and displays a repository use report based on the properties that you set up using the **Include in Report** menu.
4. To print the report, select **Print** from your browser menu bar.

## Root collections

---

Use **Content Management / Root Collections** to select the collections that you want to appear as top-level collections on your site home page.

To select root collections:

1. From the **Administration** menu, click **Content Management / Root Collections**.

The Root Collections page appears displaying all of the collections that are currently set as root.

2. To add a collection to the site root, select the collection from the **Allowed Collections** list and click the **right arrow**.

DocuShare adds the collection to the root collection list.

3. To remove a collection from the site root, select the collection from the **Selected Root Collections** and click the **left arrow**.

DocuShare removes the collection from the root collection list.

4. If you want to return to the saved settings, click **Reset**.

5. If you want to save your root collection changes, click **Apply**.

DocuShare saves your root collection changes and displays your new root collection list on the DocuShare home page.

## Trashcan contents

---

Use **Content Management / Trashcan Contents** to enable/disable the trashcan, set object expiration period, and either restore or expunge objects from the trashcan. The trashcan must be enabled for deleted objects to appear in the trashcan. If the trashcan is disabled, all deleted objects are automatically expunged. You cannot recover an object after it is expunged.

To enable the trashcan:

1. From the **Administration** menu, click **Content Management / Trashcan Contents**.

The Trashcan Contents page appears.

2. In the **Enable Trashcan** field, select **Yes**.
3. In the **Expiration Period** field, select from the menu how long you want objects to remain in the trashcan before DocuShare tags them expired.
4. If you want to return to the saved settings, click **Reset**.
5. When you have finished configuring your trashcan, click **Apply**.
6. DocuShare saves your new trashcan settings.



**NOTE:** If Enable Trashcan is set to Yes, you can restore deleted objects. If the property is set to No, you cannot restore deleted objects.

To restore deleted objects from the trashcan:

1. From the **Administration** menu, click **Content Management / Trashcan Contents**.

The Trashcan Contents page appears, displaying the objects currently in the trashcan

2. If you want to restore all of the objects in the trashcan, from the **Trashcan Contents** menu, select **Restore all**, and click **Go**.
3. If you want to restore only expired objects in the trashcan, from the **Trashcan Contents** menu, select **Restore expired**, and click **Go**.

4. If you want to restore only a few objects, select those objects that you want to restore, and from the **Trashcan Contents** menu, select **Restore selected**, and click **Go**.

The Restore Objects page appears displaying a list of the trashcan objects that DocuShare restored to their original locations.

To permanently remove deleted objects from the trashcan:

1. From the **Administration** menu, click **Content Management / Trashcan Contents**.

The Trashcan Contents page appears.

2. If you want to expunge all of the objects in the trashcan, from the **Trashcan Contents** menu, select **Expunge all**, and click **Go**.
3. If you want to expunge only expired objects in the trashcan, from the **Trashcan Contents** menu, select **Expunge expired**, and click **Go**.
4. If you want to expunge only a few objects, select those objects that you want to expunge, and from the **Trashcan Contents** menu, select **Expunge selected**, and click **Go**.

The Expunged Objects page appears displaying a total number of trashcan objects that DocuShare expunged.





# 6

## Site management

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## Class icons

---

Use **Site Management / Class Icons** to configure DocuShare so a specific icon graphic represents a specific object class.

To change an object class/icon association:

1. From the **Administration** menu, click **Site Management / Class Icons**.

The Class Icons page appears displaying the name of the DocuShare object, the icon, and the pathname to the graphics file for the icon.

2. Enter the pathname to the new icon graphics file in the appropriate **Icon Path** field.

For example, if you placed a new icon graphics file titled "newbulletin.gif" into the directory {DSHOME}/tomcat/webapps/docushare/images/small, then enter **small/newbulletin.gif** in the **Icon Path** field.

3. If you want to return to the saved settings, click **Reset**.
4. If you want to save your changes, click **Apply**.

DocuShare saves your icon changes and displays an image of the new icon in the Class Icons table.

## About DocuShare

---

Use **Site Management / About DocuShare** to view general information about your DocuShare site.

To view About DocuShare:

1. From the **Administration** menu, click **Site Management / About DocuShare**.

The About DocuShare page appears.

2. If you would like more information, click one of the links that is located on the page.

Table 6–1: About DocuShare links

Link	Description
License	License and support agreement and warranty for DocuShare software and related documentation.
Release Notes	Release notes for your version of DocuShare software.
DocuShare Website	The Xerox DocuShare website.

# Site configuration

Use **Site Management / Site Configuration** to customize the look and functionality of your DocuShare site by changing properties, such as the duration of the NEW icon or the site background image.

To edit your site configuration:

- 1. From the **Administration** menu, click **Site Management / Site Configuration**.

The Site Configuration page appears, displaying the current configuration settings.


- 2. Select and edit the appropriate fields.

See [Table 6–2](#) for property information.

Table 6–2: Site configuration properties

Property	Description
Duration of NEW icon	The length of time that the NEW icon appears next to the title of all newly created or recently edited site objects.
Mail List Delimiter	The separator, either semi-colon or comma, used between email addresses in the To field when sending a mail message to a group using the Mail To command.
Enable Abstract	Abstract is the automatic generation of a content summary property called abstract on files which are of content types that support summarization. <b>Yes</b> to enable. <b>No</b> to disable.
Enable HTML View	Converts specific documents into HTML. <b>Yes</b> to enable. <b>No</b> to disable.
Enable Thumbnails	Creates a thumbnail view of image files. The types of image files that can be viewed as thumbnails are dependent on the settings in Image Conversion. <b>Yes</b> to enable. <b>No</b> to disable.

Table 6–2: Site configuration properties

Property	Description
Enable Routing	Controls the routing of documents through the DocuShare workflow system. <b>Yes</b> to enable. <b>No</b> to disable.
Enable JavaScript	<p>Enables DocuShare to use JavaScripts to enhance the usability and data integrity of DocuShare web pages. When disabled, DocuShare displays pages in HTML. <b>Yes</b> to enable. <b>No</b> to disable.</p> <p> <b>NOTE:</b> If JavaScript is disabled, Document Routing will not work.</p>
Enable Persistent Login	<p>Provides a checkbox on the Login page that allows users to remain logged into DocuShare after closing and reopening the browser. To log out, a user must click the Logout link. If Persistent Login is not enabled, the user logs out by closing the browser. <b>Yes</b> to enable. <b>No</b> to disable.</p>
Enable Auto Login	<p>Allows the DocuShare Login Authentication to be handled by the Windows Domain Authentication. <b>Yes</b> to enable. <b>No</b> to disable.</p> <p>Refer to <b>Auto Login</b> in the Administrator Guide for instructions on setting up Auto Login.</p>
Default BGColor	The background color for all DocuShare pages, specified in hexadecimal code. The default background color, #FFFFFF, is white.
Default Background	The background image for all DocuShare pages. Specify the URL for a GIF or JPEG file.

3. If you want to return to the saved settings, click **Reset**.
  4. If you want to save your changes, click **Apply**.
- DocuShare saves your site configuration changes.

## Database properties

Use **Site Management / Database Properties** to configure your site to use external databases for document storage.

To configure database properties:

1. From the **Administration** menu, click **Site Management / Database Properties**.

The Database Properties page appears.

2. Fill in the property values as required.

See [Table 6–3](#) for property information.

Table 6–3: Database properties

Property	Description
Database Name	Name of the database you want to use for file storage.
JDBC URL	The JDBC URL to the database.
JDBC Driver	The full classname of the JDBC driver.
Provider Name	The file name of the provider (SQL Servers only).
Wait Time (MS)	The wait time (in milliseconds) before query times out (SQL Servers only).
Pool Size	The JDBC Connection pool size to maintain.
Sleep Time	The waiting period (in milliseconds) before creating a JDBC connection pool.

3. If you want to return to the previous database properties settings, click **Reset**.

4. If you want to save your changes, click **Apply**.

DocuShare saves your database properties changes.

## License

---

Use **Site Management / License** to license your DocuShare site. Your unique DocuShare license number determines the maximum allowed number of registered users on your site, in addition to enabling various add-ons such as foreign languages and LDAP/Domains.

To edit your DocuShare license:

1. From the **Administration** menu, click **Site Management / License**.  
The Server License Management page appears.
2. Enter the license number string in the **License** field.
3. Click **Apply**.

DocuShare saves the new license string and begins functioning according to the new license attributes.

## Repository log files

Use **Site Management / Repository Log Files** to enable site access and error logging and to specify directory pathnames for log downloads. DocuShare provides a custom logging facility that stores operational information in comma-separated value (CSV) format files. These CSV files can be easily read by most spreadsheet and database applications.

To enable and configure site logging:

1. From the **Administration** menu, click **Site Management / Repository Log Files**.  
The Repository Log Files page appears.
2. Fill in property values as required.  
See [Table 6–4](#) for property information.

Table 6–4: Repository Log Files properties

Property	Description
Access Log	The pathname to the Access Log file.
Error Log	The pathname to the Error Log file.
Access Log File Size	The maximum size, in bytes, allotted to the Access Log file.
Error Log File Size	The maximum size, in bytes, allotted to the Error Log file.
Enable Logging	Enables DocuShare to accumulate information into a comma-separated value (CSV) log file. <b>Yes</b> enables logging. <b>No</b> disables logging.

3. If you want to return to the previous logging settings, click **Reset**.
4. If you want to save your changes, click **Apply**.  
DocuShare saves your logging changes.

To download a log file:

1. Click either **Download Error Log** or **Download Access Log**.  
DocuShare displays the selected log file.



## MIME types

---

MIME (Multipurpose Internet Mail Extensions) types provide a standard method of classifying the file types that are used on the Internet. All Internet programs and browsers, including DocuShare, maintain a list of standard MIME types. The MIME type list makes it possible for DocuShare to easily transfer files of the same type between servers running on different operating systems.

A MIME type contains two parts; a **MIME type** and a **MIME subtype**. A slash (/) separates the two parts. To illustrate this, the MIME type **application/msword** indicates that the MIME type is an application and the MIME subtype is msword.

Use **Site Management / MIME types** to create a new MIME type or edit an existing MIME type for any file used on your DocuShare site, and associate that file with a specific icon, application, or file extension. Administrator tools also provide you with the option of setting DocuShare so it uses either the MIME type/file extension as defined in the MIME type table or it selects a MIME type/file extension based on the actual contents of the file.

To change the MIME type assignment method:

1. From the **Administration** menu, click **Site Management / MIME types**.

The MIME Types page appears displaying the currently used MIME Type Assignment Method and a button that allows you switch to the alternate method.

The two methods are **file extension algorithm** and **file content algorithm**.

2. Click the **Switch to** button.

DocuShare switches from the current assignment method to the alternative assignment method.

To add a new MIME Type:

1. From the **Administration** menu, click **Site Management / MIME types**.

The MIME Types page appears.

2. Locate the top line of the Current MIME Types table and fill in all of the blank fields with information about your new MIME type.

See [Table 6-5](#) for MIME type property information.

3. When you have finished editing the MIME type fields, click **Add**.

DocuShare adds the new MIME type to the MIME types table.

Table 6–5: MIME type properties

Property	Description
Index	Indexes the content of files created with the application specified by the MIME type. Set Index for Search to Yes for a MIME type that supports indexing (see <a href="#">Appendix A, File formats supported by DocuShare</a> , for the complete list of supported formats). If the MIME type does not support indexing, set Index for Search to No.
Abstract	Creates an abstract of a file by summarizing its content. You can set Generate Abstract to Yes for a file format that supports summarization (see <a href="#">Appendix A, File formats supported by DocuShare</a> , for the complete list of supported formats). The file's abstract is displayed when viewing its properties, in search results, and in subscription email notifications.
HTML	Determines whether or not a HTML conversion should be applied to the MIME type for display.
Icon path	The path of the GIF image used to represent the file format. The image file must be located in the <b>{DSHOME}/tomcat/webapps/docushare/images/small</b> directory. Therefore, enter the subdirectory and filename only. For example, small/doc.gif.
MIME type	The MIME type, a slash (/), and the MIME subtype. For example <b>application/msword</b> indicates that the MIME type is an application and the MIME subtype is msword.
File Extension	The filename extension(s) associated with the file format. If you are using the file extension algorithm to assign the MIME type to uploaded files, DocuShare checks the file extensions listed in the Current MIME Types table and assigns the corresponding MIME type to the file. Users can change the MIME type by editing the file's Content Type property.

To edit an existing MIME Type:

1. From the **Administration** menu, click **Site Management / MIME types**.

The MIME Types page appears.

2. Click **Edit** that is next to the appropriate MIME table entry

The Edit MIME type page appears.

3. Make the appropriate changes to the Edit MIME type page.

See [Table 6–5](#) for Edit MIME type property information.

4. If you want to return to the saved settings, click **Reset**.

5. If you want to save your changes, click **Submit**.

DocuShare saves your MIME type changes and displays the changes in the Current MIME types table.

To remove an existing MIME Type from the MIME Type table:

1. From the **Administration** menu, click **Site Management / MIME types**.

The MIME types page appears.

2. Locate the MIME entry that you want to delete.

3. Click **Delete**.



**NOTE:** You can delete only custom MIME types. You cannot delete system MIME types.

## Site operations

---

Use **Site Management / Site Operations** to toggle your site between Read/Write and Read Only modes, and to create and display site-wide a customized administrator message.

To toggle your site between Read/Write and Read Only modes:

1. From the **Administration** menu, click **Site Management / Site Operations**.

The Site Operations page appears.

2. Select either **Read/Write** or **Read Only** from the **System Mode** menu.
3. If you want to return to the previous settings, click **Reset**.
4. If you want to save your changes, click **Apply**.

DocuShare is now in the mode you set.

To create and display an administrator message:

1. From the **Administration** menu, click **Site Management / Site Operations**.

The Site Operations page appears.

2. Enter an administrator message in the **Admin Message** field.

The message may contain a combination of letters, numbers, and special characters.

3. To display the administrator message, click **True** next to **Show Admin Message**.

To hide the administrator message, click **False**.

If you want to return to the previous settings, click **Reset**.

4. If you want to save your changes, click **Apply**.

DocuShare now displays your administrator message throughout your site.

## Directory paths

---

Use **Site Management / Directory Paths** to enter pathnames to the site document repository directory and to the site temporary file directory.

To enter directory paths:

1. From the **Administration** menu, click **Site Management / Directory Paths**.

The Directory Paths page appears.

2. Enter pathnames as required.

For a description of pathnames properties, see [Table 6–6](#).

Table 6–6: Paths properties

Property	Description
TMP Directory	The physical directory used by DocuShare to store temporary files. The primary use of this directory is to temporarily store user files while DocuShare is processing file upload commands.
Document Repository	DocuShare stores repository content information in two locations. DocuShare stores object properties (metadata) in the database. DocuShare stores files in the directory specified by in this field. You may enter a pathname external to the local site, if you choose to have DocuShare store files on another server.

3. If you want to return to the previous pathname settings, click **Reset**.
4. If you want to save your changes, click **Apply**.

DocuShare saves your pathname changes.



# 7

## Admin UI Configuration

- Admin UI Configuration .....7-2

# Admin UI Configuration

Use **Admin UI Configuration** to select the default Administration menu style and to set how many levels of information that you want to log.

To edit the admin application configuration:

- 1. From the **Administration** menu, click **Admin UI Configuration**.  
The Admin UI Configuration page appears.
- 2. Set the properties as required.  
For a description of properties, see [Table 7–1](#).

Table 7–1: Admin UI Configuration properties

Property	Description
Logging Level	Based on the logging level that you select, the monitor service records information during execution. Logging levels are listed in ascending order of priority with information recorded only for levels equal or greater than the selected logging level. For example, the DEBUG level will result in the recording of information for all levels throughout the system whereas ERROR will only trigger ERROR, LETHAL and FATAL levels to be logged.
Use Applet Menu	Enables the use of a Java applet to display the Administration menu. <b>Yes</b> means display the Applet version of the Administration menu. <b>No</b> means display the HTML version of the Administration menu.

- 3. If you want to return to the default configuration settings, click **Reset**.
- 4. If you want to save your changes, click **Apply**.  
DocuShare saves your Admin UI Configuration changes.



# 8

## Customizing your site

- DocuShare site customization . . . . . 8-2
- Customizing site styles . . . . . 8-3
- Customizing the DocuShare VDF interface . . . . . 8-4
- The software developers kit (SDK) . . . . . 8-6

## DocuShare site customization

---

There are a number of ways you can customize your DocuShare site to give it a unique look and feel. Some customization requires only site administrator privileges, while other customization requires programming experience using html/xml editors and tools.

Ways to customize your DocuShare site include the following:

- **Site styles customization** requires site administrator privileges.
- **DocuShare VDF interface customization** requires experience programming in XML.
- **Custom scripts and client applications** requires experience programming in Microsoft Visual Basic, Visual Basic for Applications, Visual Basic Script, or C++ and a working knowledge of the DocuShare Software Developers Kit (SDK).

## Customizing site styles

---

You can use the tools available in the Administration menu to make minor changes to your DocuShare site.

- **Create custom properties**

You can use the Administration menu / Object Properties tools to create custom object properties such as new input fields and new menus. Refer to [Chapter 2, Object properties](#) for details on creating custom object properties.

- **Change site styles**

You can use the Administration menu / Site Management / Site Configuration tools to customize a number of site attributes, such as the default background color or image. Refer to [Chapter 6, Site management](#) for details on changing site styles.

# Customizing the DocuShare VDF interface

---



NOTE: Customizing the DocuShare VDF interface templates requires XML programming experience.

All of the DocuShare interface pages are written in XML. You can use any XML editor to customize the look of any DocuShare page template. You may add or delete graphics or text, change font and background styles, add or modify existing information fields.

Refer to the *DocuShare VDF Reference Guide* for information on customizing DocuShare interface templates.

## Things you should know about interface customization

When DocuShare displays any interface page, it is displaying a XML template that includes dynamic information specific to that page.

1. You should customize a copy of a template, not the original template file.
2. DocuShare interface templates are located in two folders within the DocuShare directory tree.

- The **docushare/templates** folder is the default folder for all DocuShare templates.

Within the Templates folder there are various language folders that contain foreign language versions of the interface templates. The default folder for English is `docushare/templates/en-us`.

- The **docushare/local** folder is where you should place all customize templates during development.

When the DocuShare session manager looks for a template to display, it first looks in the `docushare/local` folder. If the session manager does not find a template within local, it then looks in the templates folder.

- For each template there are two files; a **.VDF** file and a **.VDC** file. You edit only the VDF file.

## View definition format - VDF

DocuShare interface templates are HTML/XML files, saved as .VDF files. The VDF template language is based on XML 1.0. VDF defines eight XML elements, viewdef, define, insert, with, iter, if, else, and elif, which are used for basic programmatic structures within a VDF template.

You edit the VDF file just as you would edit any HTML/XML file. A VDF template file maps to a specific DocuShare command, such as Add User or Edit Property.

## VDC format

When DocuShare makes a call to a VDF template file, the parser converts the .VDF file into a compiled .VDC file. DocuShare stores the VDF and the VDC files in the same template folder. Whenever you edit a VDF file, the parser recognizes that there is an edited file in the folder and generates a new VDC file to replace the old VDC file.

Whenever a page is requested to be shown, the DocuShare session manager calls a VDC template file, it does not call a VDF file.

## How DocuShare uses the interface templates

A brief schematic of how DocuShare uses VDC files is illustrated below:

1. Commands selected from the browser are sent as HTML to the DocuShare web server.
2. The DocuShare session manager calls requested VDC template file along with the necessary information from the DocuShare database.
3. The session manager sends the template and database information to the webserver, where the parser converts the file/information into browser readable HTML.
4. A browser interprets the html and displays the DocuShare page along with all unique data within that page.

## The software developers kit (SDK)

---



NOTE: Use of the SDK requires programming experience in MicroSoft Visual Basic, Visual Basic for Applications, Visual Basic Script, or C++.

The optional DocuShare Windows Client Software Developers Kit, or SDK, is a collection of common objects that you can use for programming in the Windows environment. The SDK allows you to easily create custom client applications and macros for use with DocuShare. The DocuShare Windows Client and PaperPort Link applications that come with DocuShare were both built using the SDK.

The SDK application is easy to install and use, and provides you with:

- A simple object access, enumeration, and property access interface to the DocuShare object types.
- A server map interface that lets you map DocuShare servers to the client cache.
- A low-level gateway interface that translates API parameters into XML commands and manages the server socket connection.
- SDK online help.
- Samples of utilities and macros that illustrate what you can create using the SDK.
- A commandline DSAXESS console interface to the DocuShare server.

# 9

## Troubleshooting DocuShare

- Solving common problems . . . . . 9-2

## Solving common problems

---

This section provides solutions to some common problems you might have while using DocuShare.

### **Cannot connect to DocuShare site**

#### **Problem**

Using Internet Explorer, you cannot connect to a specific DocuShare site.

#### **Solution**

You must use a proxy server if your PC is on a private intranet and you are attempting to connect to a DocuShare site that is on the Internet. Check Internet Explorer proxy server settings at Tools/Internet Options/Connections/LAN Settings.



## Cannot view selected file

### Problem

When you attempt to download and view a file from a DocuShare collection, either a strange or meaningless icon appears in the browser window or an **Open With** window appears.

### Solutions

1. You may not have a valid icon/application association. There are two methods to correct this problem:
  - **Method 1:** In your Windows Explorer go to View/Options/File Types and edit the file icon so the correct application opens the file.
  - **Method 2:** In the **Open With** window, select from the list the application you want to use to open the file.

Check **Always use this program to open this type of file** if you want to make this file association permanent.
2. You may have recently installed Quicktime. Quicktime software changes your File Types TIFF file association without installing a TIFF viewer.

There are two methods to correct this problem:

- **Method 1:** Custom install a Tiff viewer  
Use the Quicktime custom install and install the Tiff viewer browser plugin that is available on the Apple website.
- **Method 2:** Use the application "wangimg.exe" to reset the file associations
  1. Uninstall Quicktime.
  2. Select any Tiff file on your workstation.
  3. Press and hold SHIFT while you right-click the Tiff file.
  4. From the menu, click **Open With**.
  5. In the Open With window, click **Other**.
  6. In the Open With window, navigate to c:\program files\windows nt\accessories\imagevue\wangimg.exe.
  7. Select wangimg.exe and click **Open**.
  8. Check **Always use this program to open this type of file** if you want to make this file association permanent.
  9. Click **OK**.

## Permissions error appears

### Problem

A permission error appears whenever you attempt to use the DocuShare site.

### Solution

There is probably an NT permissions problem. This problem is common when DocuShare is installed on a Primary Domain controller or on a Backup Domain controller. In most cases the cause of the problem is the IUSR\_[machinename] users account is not enabled. DocuShare uses this account for all read/write transactions to the NTFS file system.

Use the following procedure to correct this problem:

1. Use Window Explorer to navigate to the DocuShare directory file.
2. Right-click the **DocuShare directory file folder**.

A menu appears.

3. Select **Properties**.

The DocuShare Properties window appears.

4. Click the **Securities** tab in the Properties window.
5. Click the **Permissions** button in the Securities window.

The Directory Permissions window appears.

6. Check **Replace Permissions on Subdirectories** and **Replace Permissions on Existing Files**.
7. Click **OK**.



**TECH NOTE:** DocuShare requires the IUSR\_[ComputerName] account directories to have the following NTFS permissions:

- Read permission to the drive that holds your DocuShare site.
- RWXD permission to the Temp directory.
- RWXD permission to the DocuShare directory structure.
- RWX/RX to the \winnt\system32\inetsrv directory.

## Cannot download DocuShare files

### Problem

You can add and view files on your DocuShare site, but when you attempt to download a file, the browser displays the error **The page cannot be displayed**.

### Solution

There is a bug in the Microsoft Windows NT Service Pack 6 software that prevents DocuShare from working correctly. If your server is running NT SP6, go to the Microsoft website. Download and run the sslune41.exe hotfix.



TECH NOTE: If the problem still occurs, check the version number of **w3svc.dll** located in winnt\system32\inetsrv. The correct version should be 4.02.728. If the version number is not correct, then rerun sslune41.exe.

## DocuShare performance is slow

### Problem

DocuShare overall performance appears very slow. The performance of other applications running on the same server appears to be normal.

### Solution

There are two possible solutions for this problem:

- If performance slows only when you access a particular collection, check to make sure that the collection contains no more than 50 objects. It takes time for the server to dynamically build the collection htm file before the browser can display it. The more files within a collection, the longer it takes to build the htm file. Break up large collections into a number of smaller ones.
- Check the server virus scan software settings. DocuShare performance slows if you have Enable-On-Access selected. To improve DocuShare performance:
  1. Deselect Enable-On-Access scanning.
  2. Exclude from scanning the entire DocuShare directory. Do not exclude the DocuShare/documents directory.
  3. Deselect scanning outbound files.

## "Not authorized" message appears

### Problem

When you are using certain DocuShare tools you get a **trace back error**, similar to the one shown below:

```
G:\inetpub\wwwroot\Docushare\bin>change_owner -k Collection-17 User-23 >
g:\inet pub\wwwroot\docushare\bin\log.txt
Traceback (innermost last):
File "change_owner.py", line 95, in ?
File "change_owner.py", line 90, in main
File "change_owner.py", line 48, in run
File "d:\release\2.2\workgroup\win32\DocuShare\classes\Walker.py", line 26,
in __init__
File "d:\release\2.2\workgroup\win32\DocuShare\classes\ObjectMgr.py", line 81,
in lookup
File "d:\release\2.2\workgroup\win32\DocuShare\classes\Database.py", line 164,
in lookup_handle_as_dict
File "d:\release\2.2\workgroup\win32\DocuShare\classes\ACLMgr.py", line 339, in
validate_user
DSEExceptions.DSAuthorizationException: Not Authorized
G:\inetpub\wwwroot\Docushare\bin>
```

### Solution

1. Determine who on your DocuShare site is assigned the handle **User-2**.
2. Make User-2 a member of Admin Group 1.

User-2 must be a member of Group 1 to avoid receiving this error message.



# A

## File formats supported by DocuShare

- File formats supported by DocuShare .....A-2

# File formats supported by DocuShare

DocuShare uses Verity technology to provide full-text indexing and HTML conversion. Using Verity, DocuShare can index the content of files even if they are in a non-text format, such as MSWord. The DocuShare View option uses Verity Key View™ technology to convert the non-text format documents into HTML documents.

At installation, DocuShare loads the list of supported file formats, or MIME types. Refer to [Chapter 6, Site management](#) - MIME types for instructions on editing the file format list.

DocuShare does not automatically convert every document to HTML. Instead, HTML conversion occurs on the first viewing of a file. DocuShare saves the HTML rendition for subsequent viewing. DocuShare deletes the HTML document when a new version of the original document is added to the site and that document is viewed.

[Table A–1](#) lists all of the file types that are currently supported by DocuShare.

- **Application:** the application or type of application used to create a file.
- **MIME type:** the MIME type associated with an application.
- **Indexed:** whether or not DocuShare indexes the content of the file.
- **Summarize:** whether or not DocuShare summarizes the content of the file.
- **HTML conversion:** whether or not DocuShare converts the content of the rendition into HTML. You cannot change the setting for HTML conversion. Some files show an N in this column because that file is already in a browser-viewable format.

Table A–1: File formats supported

Application	MIME Type	Indexed	Summarize	HTML Conversion
AIFF Audio	audio/x-aiff	N	N	N
Ami Pro	application/vnd.lotus-amipro	Y	Y	Y



Table A–1: File formats supported

Application	MIME Type	Indexed	Summarize	HTML Conversion
Applix Words	application/vnd. applix-words	Y	Y	Y
AU Audio	audio/basic	N	N	N
AutoCAD	image/vnd.dxf	N	N	N
AutoDesk	image/vnd.dwg	N	N	N
AVI Movies	video/avi	N	N	N
Bitmaps	image/bmp	N	N	Y
CGM Graphics	image/cgm	N	N	N
Compressed files	application/x - compressed	N	N	N
Corel Draw	application/vnd. corel - draw	N	N	Y
Corel Presentations	application/vnd. corel presentations	Y	Y	Y
Encapsulated Postscript	application/eps	N	N	Y
Encrypted PGP	application/pgp encrypted	N	N	N
Framemaker	application/vnd. framemaker	N	N	N
GIF Images	image/gif	N	N	N
Gzip	application/x - gzip	N	N	N
Harvard Graphics	image/vnd. harvard graphics	N	N	N

Table A–1: File formats supported

Application	MIME Type	Indexed	Summarize	HTML Conversion
HTML	text/html	Y	Y	N
JPG images	image/jpeg	N	N	N
Lotus 123	application/vnd.lotus-123	Y	N	Y
Lotus Freelance	application/vnd.lotus - freelance	Y	Y	Y
Lotus Symphony	application/vnd.lotus - symphony	N	N	N
Lotus Word Pro	application/vnd.lotus- wordpro	Y	Y	Y
Microsoft Access	application/vnd.ms-access	N	N	N
Microsoft Excel	application/vnd.ms - excel	Y	N	Y
Microsoft PowerPoint	application/vnd.ms - powerpoint	Y	Y	Y
Microsoft Project	application/vnd.ms - project	N	N	N
Microsoft Publisher	application/vnd.ms - publisher	N	N	N
Microsoft Word	application/msword	Y	Y	Y
Microsoft Works	application/vnd.ms-works	Y	Y	Y
MIDI Audio	audio/x-midi	N	N	N
MPEG Movies	video/mpeg	N	N	N

Table A–1: File formats supported

Application	MIME Type	Indexed	Summarize	HTML Conversion
PageMaker	application/vnd.pagemaker	N	N	N
PDF Viewer	application/pdf	Y	N	N
PGP Keys	application/pgp-keys	N	N	N
PGP Signature	application/pgp-signature	N	N	N
PICT Images	image/x-pict	N	N	N
PKZip	application/x-zip	N	N	N
Plain Text	text/plain	Y	Y	N
PNG Images	image/png	N	N	N
Postscript	application/postscript	N	N	N
Quattro Pro	application/vnd.quattro-pro	Y	N	Y
QuickTime Movies	video/quicktime	N	N	N
Real Audio	audio/real-audio	N	N	N
Rich Text Documents	application/rtf	Y	Y	Y
SGML	text/sgml	Y	Y	N
SHAR	application/x-shar	Y	N	N
Stuftit	application/x-stuffit	N	N	N
SVF Images	image/vnd.svf	N	N	N

Table A–1: File formats supported

Application	MIME Type	Indexed	Summarize	HTML Conversion
Tar	application/x-tar	N	N	N
Targa Images	image/targa	N	N	N
TIFF Images	image/tiff	N	N	Y
USENET News	message/news	Y	Y	N
WAV Audio	audio/x-wav	N	N	N
Windows Metafile	image/vnd. windows - metafile	N	N	N
Windows Write	application/vnd. ms- write	N	N	N
WordPerfect	application/vnd. wordperfect	Y	Y	Y
WordStar	application/vnd. wordstar	N	N	N
XML	text ? xml	Y	N	N

# B

## Command lines and scripts

- Script to automate virus checking . . . . .B-2
- Script to move your DocuShare site. . . . .B-4
- Scripts to backup your site . . . . .B-5
- Writing subscription scripts. . . . .B-7
- Command line utilities . . . . .B-9

## Script to automate virus checking

---

Below is an example of a script that you could use to automate your virus checking tasks. This script is written for use with McAfee VirusScan software running on Unix OS.

```
30 23 * * * (date; /Vol01/vscan/v3_12/uvscan --atime-  
preserve --clean --summary --recursive --data-directory /  
Vol01/vscan/v3_12/3103a/Vol01/DocuShare/documents ; date)  
| /Vol01/DocuShare/local/dsvirus_rpt | mailx -s "DocuShare  
VirusScan cron:" dsadmin
```

This script runs every night at 11:30 pm. In this script **dsvirus\_rpt** is another script written by the site administrator. From Standard In it reads the following:

- The date and time for the start of the virus scan
- The output of the McAfee uvscan program, which is instructed to clean everything in the Vol01/DocuShare/documents directory.
- The date and time for the end of the virus scan
- Dsvirus\_rpt prints a virus scan report to Standard Out. Each night after the scan completes, dsvirus\_rpt emails a copy of the report to the site administrator.

## Virus found

If a virus scan finds a virus on your DocuShare site, the uvscan program displays a message in the following form: **Document-39 infected with XYZ virus.**

Dsvirus\_rpt takes the information in this message form and uses the DocuShare command line interface to find key information about Document-39. Dsvirus inserts that information into the message and sends the report to the site administrator in addition to sending a virus notification to the owner of Document 39.

## DocuShare and virus protection

Depending on the security policies of your organization, consider the following when planning virus protection for your DocuShare site.

- Reboot and perform a full system check before installing anti-virus software on your DocuShare server. Ideally, you should perform this as part of the initial system installation and configuration of the server operating system.
- Configure your anti-virus tool to scan all files and subdirectories in the directory **%DSHOME%\documents**. By default, DocuShare stores all files in this directory.
- Configure your anti-virus tool to scan all files without regard to file extensions. DocuShare renames files, so if you configure your anti-virus tool to scan only standard executable files, such as .exe or .bat, some files will not get scanned.
- Do not configure your anti-virus tool to delete files or move files to a quarantine area when a virus is detected. Deleting or moving a DocuShare file causes inconsistency between the database metadata and the contents of the document repository.
- Configure your anti-virus tool to flag infected files for manual deletion. Use either the DocuShare **dsdelete** command to delete multiple infected files or the web browser interface for single infected files. Using this method maintains database/repository consistency. If your security policy permits cleaning infected files, you can configure your anti virus tool to automatically clean flagged files.
- To improve DocuShare performance when running anti-virus checking in the background, configure your anti-virus tool so it scans only inbound (uploading) files.
- To improve DocuShare performance when you have your anti-virus tool configured to scan programs when they are executed, configure the tool so it does not scan programs in the DocuShare directory, with the exception of the directory **%DSHOME%/documents**.
- Keep your anti-virus tool current by updating it frequently. Also install all new operating system and web server security patches when they become available.

## Script to move your DocuShare site

---

The maximum size of your site repository is limited by the size of the volume where your site runs. DocuShare operations cannot cross logical partitions. If your site should outgrow the current disk space allocation, you can move the entire site to a new partition or to a large disk drive.

You move your DocuShare site to a larger partition or drive:

1. Set your DocuShare server to Read-Only.
2. Stop your DocuShare server using one of the following methods:
  - On an NT with IIS, stop the IIS web server.
  - On a Solaris using Apache, run the command `${DSHOME}/bin/stop_docushare`.
  - On a Netscape web server, use the Netscape administration server commands to stop the primary DocuShare web server.
3. Backup your entire DocuShare site to a safe location.
4. Copy the entire DocuShare directory tree **/current location name/DocuShare/documents/\*** to the new drive or new partition.
5. Create a new TMP directory on the new drive or new partition and name it **/new partition name/DocuShare/TMP**.
6. Restart your DocuShare server.
7. Change paths for the repository and for the TMP location.
8. Return your DocuShare server to Read/Write mode.



## Scripts to backup your site

---

You should schedule and perform on a regular basis, a complete backup of your DocuShare site. Backup the following:

- Your entire DocuShare site immediately after installation
- Customized files and directory structures
- Modified VDF templates.
- Message db files
- TMP directory
- Repositories

DocuShare stores repository data in two locations on your site directory. You should do regular backups of these repositories.

- User files, generally the largest file on your DocuShare site, are stored in **docushare/documents**.
- Objects and object property files are stored in **docushare/metadata**.

### Maintain\_docushare script

The maintain\_docushare script puts the DocuShare server into Read-Only Mode, runs dsindex, does a simple database backup, then returns the server to Read/Write Mode.

To perform a simple backup, enter and run the following maintain\_docushare script:

```
#!/bin/sh

/docushare-home-path/DocuShare/bin/dssetprop Server read-only true

cp -r/docudata/DocuShare/Metadata/some-other-volume/
backup/docushare-home-path/DocuShare/bin/dssetprop Server
read-only false
```

## Maintain\_docushare batch file

You may choose to backup your site by creating and running a batch file. A `maintain_docushare.bat` file puts the DocuShare server into Read-only Mode, runs `dsindex`, does a simple database backup, then returns the server to Read/Write Mode.

To perform a simple backup, enter and run the following `maintain_docushare` batch file script:

```
c:\docushare-home-path\DocuShare\bin\dssetprop Server  
read-only true
```

```
xcopy /s c:\docushare-home-path\DocuShare\Metadata  
d:\some-other-volume\backup c:\docushare-home-  
path\DocuShare\bin\dssetprop Sever read-only false
```

## Writing subscription scripts

---

You may create custom scripts that work with the DocuShare subscription service. Refer to [Subscription properties on page 2–33](#) for information on adding a custom script.

Refer to the *DocuShare VDF Reference Guide* for a complete list of DocuShare commands and arguments.

Save your custom script as a script file, such as a .bat or shell file.

### Sample script

The following commands make up a very simple script that uses the DocuShare command line utility **dssetprop** to set the value of a specified property of a specified object. In this case, the script sets the value of the summary property of the subscribed object, to the value of argument set that DocuShare passed to the script.

#### Windows version:

```
@echo off
dssetprop %1 summary %*
```

#### Solaris version:

```
#!/bin/csh -f
dssetprop %1 summary $argv[*]
```

### Install the script

To install your script:

1. Place the script executable file in the docushare/local directory.
2. If the script requires additional files, such as an .ini file, place those files in the Windows system directory (generally WinNT/system32).
3. Configure the Subscription properties of your DocuShare by entering the name of the script into the Script property field.

## Run the script

When a subscription action occurs on your site, such as when a file is modified, DocuShare launches the script as a separate and detached process. The script runs as the command shell command `<script name> <handle> <user name> <user handle> <command name> <client data>`.

DocuShare passes to the script the following parameters:

Table B–1: Subscription script parameters

Parameter	Description
handle	The handle of the object, such as File-123, on which the subscribed-to action occurred. If the subscription is set for "something added", then the handle in your script would be the handle of the added object.
user handle	The handle of the user who performed the subscribed-to action, such as User-33.
command name	The DocuShare action that triggered the subscription notice, such as Apply or Add.
client_data	Optional: The value of the property of this name on the subscription.

## Script running environment

In Windows, the working directory is the Windows system directory, usually WinNT/system32. On Solaris systems, the working directory is root. The script can be written to reset the working directory when the script gains control.

## Script run errors

For every subscription action, the subscription service adds an entry to the DSNotificationSvc.log file located in the docushare/log directory. This entry is made for both email and script subscription actions.

Reviewing the log shows that the script was launched and parameters passed. The log also shows the result code returned. In Windows, the result code is always the success result, even if there was a launch problem. Because the script is run as a separate process, DocuShare does not receive any information about the script run results.

## Command line utilities

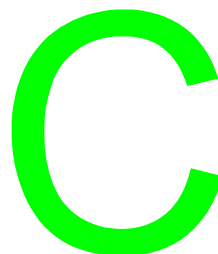
The DocuShare command line interface provides a wide array of utilities for reading and editing object and server properties. Use the table below for command line utility names and functions. Refer to the *DocuShare VDF Reference Guide* for more detailed information.

Table B–2: Command line utilities

Command Line	Description
<code>dslistprop <i>handle</i></code>	List the names of properties available for the object identified by <i>handle</i> .
<code>dslistprop <i>Server</i></code>	List the names of properties available for the server identified by <i>Server</i> .
<code>dsgetprop <i>handle property-name</i></code>	Return the value of the <i>property-name</i> for the object identified by <i>handle</i> .
<code>dsgetprop <i>Server property-name</i></code>	Return the value of the server configuration property identified by <i>property-name</i> .
<code>dssetprop <i>handle property-name value</i></code>	Set the value of <i>property-name</i> for the object identified by <i>handle</i> to the value identified by <i>value</i> .
<code>dssetprop <i>Server property-name value</i></code>	Set the value of the Server configuration property identified by <i>property-name</i> to the value identified by <i>value</i> .
<code>dslock <i>file-handle</i></code>	Lock the file identified by <i>handle</i> . The option <code>-u <i>user-handle</i></code> enables file locking as a specific user. The default user is admin.
<code>dsunlock <i>file-handle</i></code>	Unlock the file identified by <i>handle</i> . The option <code>-u <i>user-handle</i></code> enables file unlocking as a specific user. The default user is admin.

Table B–2: Command line utilities

Command Line	Description
<code>dsdelete <i>handle</i></code>	Delete the object identified by <i>handle</i> . If the object is a container, all objects within that container are also deleted.
<code>dsexport <i>handle</i></code>	Export the object identified by <i>handle</i> . Consult the VDF Reference Guide for command options.
<code>dsimport <i>file</i></code>	Import a text file identified by <i>file</i> . Consult the VDF Reference Guide for command options.
<code>dsindex <i>argument</i></code>	Rebuild the search indices according to the arguments. The generic command/argument is <b>dsindex index_all</b> .



## DocuShare 3.0 system requirements

- Server—minimum system requirements . . . . . C-2
- Client—minimum system requirements . . . . . C-3

# Server—minimum system requirements

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## Windows

- 600 Mhz Pentium III or equivalent
- 512 MB RAM
- 500 MB free disk space
- Windows NT Server 4/SP 6a or higher or Windows 2000 Server
- Microsoft IIS 4.0, 5.0 or iPlanet 6.x

## UNIX (Solaris)

- Sun UltraSparc II
- 512 MB RAM
- 500 MB free disk space
- Sun Solaris 2.7, 2.8, 2.9
- Apache 2.x Web Server, Sun ONE Web Server (iPlanet 6.0)

## UNIX (Linux)

- 600 Mhz Pentium III or equivalent
- 512 MB RAM
- 500 MB free disk space
- Red Hat Linux 7.3



# Client—minimum system requirements

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## Web Interface

- Any platform (Windows, Mac OS, UNIX) with a current web browser (Internet Explorer 4.x or higher, Netscape Navigator 4.7 or higher recommended).

## WebDAV (Web Folders) Interface

- Any platform (Windows, Mac OS, UNIX) with native support for WebDAV/ Web Folders. Tested with Microsoft Windows 2000, XP, Apple MACOS-X

## Windows Interface

- Microsoft Windows 98, NT4, 2000, XP
- Internet Explorer 5.x or higher (required)
- Microsoft Office 97, 2000, XP

## Email Interface

- Microsoft Outlook 98 (features limited), 2000, XP

